

2007 SEED REPORT

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF AGRICULTURE

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SEED REPORT - 2007

This is a report of the activities of the Seed Division from July 1, 2006 to June 30, 2007. The Division is responsible for (1) administration and enforcement of the Pennsylvania Seed Act; (2) administration of the Seed Certification Act; (3) operation of the State Seed Laboratory; and (4) maintaining the seed herbarium.

PENNSYLVANIA SEED ACT

This report is a summary of official seed inspection and laboratory analyses performed on official samples of seeds drawn under the authority of the Pennsylvania Seed Act.

The Seed Act was amended in January 2005. There were significant changes to the Act, one being the requirement for all person(s) whose name appears on the seed analysis label must obtain an annual Seed License at a cost of \$25. You may find a copy of the Seed Act and license application at: www.agriculture.state.pa.us.

The Seed Act requires that all seeds be properly labeled before being offered for sale within the Commonwealth. The purpose of the Act is to insure that consumers are provided with truthful information in order to make an intelligent purchase. This information is required to be given on a tag or label attached in a conspicuous place on the exterior of the container in which the seed is sold or offered for sale. Seeds not properly labeled are subject to a "Stop Sale" order, which prohibits the sale of such seed until relabeled to be in compliance with the law.

The Pennsylvania Code Chapter 111 lists additional requirements for labeling seeds. Included are:

1. Labeling of flower seed mixtures
2. Labeling of lawn seed mixtures
3. Labeling of treated seeds
4. Labeling of seeds for sprouting
5. Germination standards for vegetable and flower seeds
6. List of prohibited noxious weed seeds
7. List of restricted noxious weed seeds including undesirable grass seed in lawn and turf seeds

The following booklets and leaflets are available from the Seed Control Official (See address on page 1) or on the departments web site.

Pennsylvania Seed Act
Pennsylvania Code Chapter 111; Seed Testing, Labeling Standards
Pennsylvania Certification Act
API 19 Seed Testing Information
API 140 Calculation of Analysis when blending 2 or more seed lots
API 150 Labeling Vegetable and Herb Seed
API 153 Labeling Flower Seeds
API 157 Labeling Lawn and Turf Mixtures

SEED CERTIFICATION

The purpose of Seed Certification is to maintain and make available to the public sources of high quality seeds and propagating materials of superior varieties grown and distributed so as to insure genetic identity. Only after passing rigid field and seed standards can seed be labeled as a class of certified seed. For a summary of crop, variety and acres inspected see Table VI. For additional information contact the Seed Section Supervisor listed on page 1. The Pennsylvania Department of Agriculture is an active member of the Association of Official Seed Certification Agencies. A total of \$14,748.60 in fees was charged for field inspection, tags, labels and other services.

SEED LABORATORY

The Seed Laboratory provides technical information and performs various tests and analyses on seed samples from various sources. All seed samples are prepared and tested according to the "Rules for Testing Seeds" as approved and published by the Association of Official Seed Analysts (AOSA). The Seed Laboratory is an active member of AOSA and cooperates in work of various committees.

A Seed Analyst attends the annual meeting of AOSA to vote on rule changes, discuss other items of business and attend committee meetings. An analyst also attends the Northeast Seed Analyst Workshop where new procedures are demonstrated. The Seed Analysts also identifies and tests seeds for the Pennsylvania Department of Transportation, Department of Environmental Protection, Department of Conservation and Natural Resources, Bureau of Animal Industry, the State Police Crime Laboratory and the general public.

The Department is also an active member of the Association of Seed Control Officials of the Northeastern States and the Association of American Seed Control Officials. A staff member usually attends the annual meeting of each organization.

Each year the Seed Analysts assist the small grain judge at the Pennsylvania Farm Show by examining each individual exhibit for noxious and common weed seeds, other crop seeds and foreign material.

During the fiscal year, the laboratory received a total of 7,494 samples, which required 10,441 separate tests. (See Table I). Plant Industry Inspectors submitted 2,551 regulatory seed samples for enforcement of the Seed Act. Farmers, wholesale seedsmen and retail outlets submitted 4,647 service samples for labeling purposes and guidance in planting. This is the largest number of service samples ever received for testing. The seed certification program and various other state agencies submitted 286 samples to determine if the seed met their standards or specifications. A total of \$50,682.10 in fees was charged for this service.

TABLE I

Classification of samples by kind and numbers of tests involved.

Number of Samples	Kinds	Purity	Noxious Weed Examinations	Germinations*
1886	Agricultural Seeds	667	967	1,805
3064	Vegetable Seeds	7	4	3,070
1582	Flower Seeds	0	0	1,577
572	Lawn Mixtures	194	226	529
265	Pasture Mixtures	37	121	178
62	Flower Mixtures	27	1	62
19	Birdfood	0	19	0
3	Tree Seed	0	0	0
8	Vegetable kits	0	0	8
23	Vegetable Mixtures	19	0	23
7,494	TOTALS	951	1,338	7,252

Other Tests	
Ryegrass fluorescence	265
400 Seed Counts on bluegrass	238
Oats fluorescence	121
Cold test	176
Interstate Noxious weed examination	18
Examinations of Farm Show Exhibits	35
Tetrazolium test	18
GMO tests	134
Miscellaneous Tests	4
TOTAL TESTS	10,441

*Includes preliminary and final seedling counts.

SEED ACT ENFORCEMENT

In the enforcement of the Seed Act, Plant Industry Inspectors visit wholesale and retail firms to inspect seed labeling and obtain samples for testing. The inspectors collected 2,541 seed samples. A total of 286 or 11.26% of these samples were found to be in violation of the Act. The inspectors also placed 315 lots of seed (5,604 containers) under "Stop Sale" at 81 locations. These "Stop Sales" are released when the owner or custodian of the seed follows the recommended procedure to have it relabeled in compliance with the law or otherwise disposed.

The tables on the following pages summarize the Seed Act Activities.

Table II is a comparison of the percentage of all violations for the past three years for all classes of seeds.

Table III represents a summary of the kinds of agriculture, vegetable and flower seeds tested with the number and percentage violation of each.

Table IV represents a summary of the inspection record of individual wholesale distributors giving total samples and number correctly labeled or in violation.

Table V represents a summary of the number of violations and reason for the discrepancy.

Table VI represents a summary of crops, varieties and acres inspected by the seed certification program.

TABLE II

A comparison of violations of seed samples taken by seed inspectors.

Kinds of Samples	Number of Samples*	% VIL		
		2006-2007	2005-2006	2004-2005
Agricultural	413	16.46%	15.80%	7.91%
Vegetable	1058	5.48%	5.45%	5.02%
Flower	769	8.58%	19.15%	5.54%
Lawn Mixtures	189	30.69%	31.83%	29.79%
Pasture Mixtures	28	60.71%	13.51%	77.77%
Flower Mixtures	39	38.46%	30.30%	28.57%
Birdfood	19	21.05%	0.00%	4.76%
Health Food	0	0.00%	50.00%	0.00%
Vegetable Kits	8	0.00%	66.66%	11.76%
TOTALS	2541	11.26%	14.10%	8.40%

* Samples collected by seed inspectors in 2006-2007.

Explanation of abbreviations used in tables.

- CL - Correctly labeled.
- SV - Serious violation, discrepancy exceeds double the tolerance.
- MV - Minor violation, discrepancy exceeds regular tolerance.
- TV - Technical violation, label does not bear all required information.
- #VIL - Number of violations.
- %VIL - Percentage of violations

TABLE III

Total of each kind tested, number and percentage of violations.

SEED KIND TESTED	AGRICULTURAL SEEDS						
	Total	CL	SV	TV	MV	#VIL	%VIL
ALFALFA	13	9	3	0	1	4	30.8
ALKALIGASS, WEEPING	1	1	0	0	0	0	0.0
ALSIKE CLOVER	2	2	0	0	0	0	0.0
ANNUAL RYEGRASS	30	26	3	0	1	4	13.3
BARLEY	14	13	1	0	0	1	7.1
BIRDSFOOT TREFOIL	8	6	0	1	1	2	25.0
BLUE FESCUE	1	1	0	0	0	0	0.0
BROME, HARLAN	1	0	1	0	0	1	100.0
BUCKWHEAT	1	1	0	0	0	0	0.0
CHEWINGS FESCUE	4	4	0	0	0	0	0.0
CORN HYBRID FIELD	7	6	1	0	0	1	14.3
CROWNVETCH	7	6	1	0	0	1	14.3
FESTULOLIUM	1	1	0	0	0	0	0.0
HARD FESCUE	9	9	0	0	0	0	0.0
ITALIAN RYEGRASS	1	1	0	0	0	0	0.0
KENTUCKY BLUEGRASS	65	47	9	0	11	20	17.7
LADINO CLOVER	1	1	0	0	0	0	0.0
MEADOW BROME	1	1	0	0	0	0	0.0
MUSTARD, FORAGE	1	1	0	0	0	0	0.0
OAT	10	9	0	0	1	1	10.0
ORCHARDGRASS	12	7	1	0	4	5	41.7
PERENNIAL RYEGRASS	58	50	4	2	2	8	13.8
RAPE	1	1	0	0	0	0	0.0
RED CLOVER	12	10	1	1	0	2	16.7
RED FESCUE	21	19	1	1	0	2	9.5
REDTOP	2	1	0	1	0	1	50.0
REED CANARYGRASS	1	1	0	0	0	0	0.0
RYE	11	8	3	0	0	3	27.3
RYEGRASS, INTERMEDIATE	5	5	0	0	0	0	0.0

SEED KIND TESTED CONTINUED	AGRICULTURAL SEED						
	Total	CL	SV	TV	MV	#VIL	%VIL
RYEGRASS, INTERMEDIATE	1	1	0	0	0	0	0.0
SMOOTH BROME	4	4	0	0	0	0	0.0
SOYBEAN	26	24	2	0	0	2	7.7
SPELT	1	1	0	0	0	0	0.0
SWITCHGRASS	3	1	1	0	1	2	66.6
TALL FESCUE	26	22	0	2	2	4	15.4
TIMOTHY	25	19	5	1	0	6	24.0
TRITICALE	1	1	0	0	0	0	0.0
WHEAT	24	23	2	0	0	2	8.0
WHITE CLOVER	3	3	0	0	0	0	0.0
TOTALS	413	345	36	7	25	68	16.5

SEED KIND TESTED	FLOWER SEEDS						
	Total	CL	SV	TV	MV	#VIL	%VIL
ACHILLEA	3	3	0	0	0	0	0.0
AGASTACHE-GIANT HYSOP	1	0	1	0	0	1	100.0
AGASTACHE FOENICULUM	3	2	1	0	0	1	33.3
AGERATUM	1	1	0	0	0	0	0.0
AGROSTEMMA	1	1	0	0	0	0	0.0
ALYSSUM, GOLDEN	1	1	0	0	0	0	0.0
ALYSSUM MARITIMUM	18	18	0	0	0	0	0.0
AMARANTH, GLOBE	1	1	0	0	0	0	0.0
AMARANTHUS	2	2	0	0	0	0	0.0
ANTIRRHINUM	1	1	0	0	0	0	0.0
ASTERS	14	14	0	0	0	0	0.0
AUBRIETA	3	3	0	0	0	0	0.0
BABY'S BREATH	9	9	0	0	0	0	0.0
BACHELOR'S BUTTON	10	10	0	0	0	0	0.0
BALSAM	1	1	0	0	0	0	0.0
BEAN, HYACINTH	1	1	0	0	0	0	0.0
BEE BALM	1	1	0	0	0	0	0.0
BELLS OF IRELAND	2	1	1	0	0	1	50.0
BLACKEYED SUSAN	1	1	0	0	0	0	0.0
BLUE FESCUE	1	1	0	0	0	0	0.0
BUTTERFLY FLOWER	4	4	0	0	0	0	0.0
CABBAGE	1	1	0	0	0	0	0.0
CACTUS	1	1	0	0	0	0	0.0
CALENDULA	4	4	0	0	0	0	0.0
CALIFORNIA POPPY	2	2	0	0	0	0	0.0
CANDYTUFT	2	2	0	0	0	0	0.0
CANTERBERRY BELLS	3	3	0	0	0	0	0.0

SEED KIND TESTED CONTINUED	FLOWER SEEDS CONTINUED						
	Total	CL	SV	TV	MV	#VIL	%VIL
CARDINAL CLIMBER	2	2	0	0	0	0	0.0
CARNATION	1	1	0	0	0	0	0.0
CELOSIA	7	7	0	0	0	0	0.0
CERINTHE	2	1	1	0	0	1	50.0
CHINESE LANTERNS	1	1	0	0	0	0	0.0
CINERARIA MARITMA	1	0	1	0	0	1	100.0
CLARKIA	1	1	0	0	0	0	0.0
CLEOME	3	3	0	0	0	0	0.0
COBAEA CUP-AND-SAUCE VINE	1	1	0	0	0	0	0.0
COCKSCOMB	1	1	0	0	0	0	0.0
COLEUS	7	6	1	0	0	1	14.3
COLUMBINE	9	7	1	0	1	2	22.2
CONEFLOWER, PURPLE	1	1	0	0	0	0	0.0
CONVOLVULUS	9	9	0	0	0	0	0.0
COREOPSIS	7	7	0	0	0	0	0.0
COSMOS	25	24	1	0	0	1	4.0
CYNOGLOSSUM	2	2	0	0	0	0	0.0
CYPRESS VINE	3	3	0	0	0	0	0.0
DAHLIA	5	5	0	0	0	0	0.0
DAISY	3	3	0	0	0	0	0.0
DAISY, PAINTED	3	3	0	0	0	0	0.0
DELPHINIUM	11	8	3	0	0	3	27.3
DIANTHUS	4	3	1	0	0	1	25.0
DUSTY MILLER	2	2	0	0	0	0	0.0
ECHINACEA	3	3	0	0	0	0	0.0
ECHINOCHLOA	1	1	0	0	0	0	0.0
EVENING PRIMROSE	1	1	0	0	0	0	0.0
FLAX, PERENNIAL	2	1	1	0	0	1	50.0
FLOWERING CABBAGE	3	3	0	0	0	0	0.0
FORGET-ME-NOT	4	4	0	0	0	0	0.0
FORGET-ME-NOT, CHINESE	3	2	1	0	0	1	33.3
FOUR O'CLOCK	12	6	5	0	1	6	50.0
FOXGLOVE	7	7	0	0	0	0	0.0
GAILLARDIA	8	8	0	0	0	0	0.0
GAZANIA	3	3	0	0	0	0	0.0
GERANIUM	4	4	0	0	0	0	0.0
GERBERA	1	1	0	0	0	0	0.0
GLORIOSA DAISY	2	1	1	0	0	1	50.0
GOMPHRENA	8	8	0	0	0	0	0.0
GOURD, MIXED	1	1	0	0	0	0	0.0
GOURD, SMALL SEEDED	1	1	0	0	0	0	0.0
GYSOPHILA	1	1	0	0	0	0	0.0

SEED KIND TESTED CONTINUED	FLOWER SEEDS CONTINUED						
	Total	CL	SV	TV	MV	#VIL	%VIL
HELENIUM	1	1	0	0	0	0	0.0
HIBISCUS	2	2	0	0	0	0	0.0
HOLLYHOCK	9	9	0	0	0	0	0.0
HONESTY, ANNUAL	1	1	0	0	0	0	0.0
ICE PLANT	1	1	0	0	0	0	0.0
IMPATIENS	19	16	3	0	0	3	15.8
IPOMOPSIS	2	2	0	0	0	0	0.0
IREFINE	1	1	0	0	0	0	0.0
JASIONE	1	1	0	0	0	0	0.0
LARKSPUR	5	5	0	0	0	0	0.0
LAURENTIA	1	1	0	0	0	0	0.0
LAVATERA	2	2	0	0	0	0	0.0
LAVENDER	1	1	0	0	0	0	0.0
LOBELIA	2	2	0	0	0	0	0.0
LUNARIA	2	2	0	0	0	0	0.0
LUPINE	5	5	0	0	0	0	0.0
LYCHNIS	1	1	0	0	0	0	0.0
MARIGOLDS	66	51	15	0	0	15	22.7
MEXICAN HAT	1	1	0	0	0	0	0.0
MEXICAN SUNFLOWER	5	5	0	0	0	0	0.0
MILLET	2	2	0	0	0	0	0.0
MONARDA	2	2	0	0	0	0	0.0
MOONFLOWER	2	0	1	0	1	2	100.0
MORNING GLORY	36	36	0	0	0	0	0.0
NASTURTIUM	20	20	0	0	0	0	0.0
NEMOPHILA	2	2	0	0	0	0	0.0
NICOTIANA	1	1	0	0	0	0	0.0
NIEREMBERGIA	1	1	0	0	0	0	0.0
ORIENTAL POPPY	4	2	2	0	0	2	50.0
ORNAMENTAL GRASS	1	1	0	0	0	0	0.0
PANSY, COMMON	7	7	0	0	0	0	0.0
PENSTEMON	1	0	1	0	0	1	100.0
PETUNIAS	4	3	1	0	0	1	25.0
PHLOX	6	5	1	0	0	1	16.7
POPPY	17	17	0	0	0	0	0.0
PORTULACA	3	3	0	0	0	0	0.0
PRIMROSE	1	1	0	0	0	0	0.0
RED HOT POKER PLANT	1	1	0	0	0	0	0.0
RUDBECKIA	3	3	0	0	0	0	0.0
SAFFLOWER	1	1	0	0	0	0	0.0
SALVIA	8	8	0	0	0	0	0.0
SCABIOSA	2	2	0	0	0	0	0.0
SHASTA DIASY	8	6	2	0	0	2	25.0
SHEEP FESCUE	1	1	0	0	0	0	0.0
SHIRLEY POPPY	2	2	0	0	0	0	0.0

SEED KIND TESTED CONTINUED	FLOWER SEEDS CONTINUED						
	Total	CL	SV	TV	MV	#VIL	%VIL
SNAPDRAGON	9	9	0	0	0	0	0.0
SPANISH FLAG	1	1	0	0	0	0	0.0
STARFLOWER	1	1	0	0	0	0	0.0
STATICE	1	1	0	0	0	0	0.0
STOCK	1	1	0	0	0	0	0.0
STRAWFLOWER	3	2	1	0	0	1	33.3
SUNFLOWER	96	85	9	0	2	11	11.5
SWEET ALYSSUM	2	2	0	0	0	0	0.0
SWEET PEA	37	37	0	0	0	0	0.0
SWEET WILLIAM	3	3	0	0	0	0	0.0
TEXAS BLUEBONNET	1	1	0	0	0	0	0.0
THUNBERGIA	3	3	0	0	0	0	0.0
TITHONIA	1	1	0	0	0	0	0.0
TRITOMA	1	1	0	0	0	0	0.0
VERBASCUM	1	1	0	0	0	0	0.0
VERBENA	3	3	0	0	0	0	0.0
VERONICA	2	2	0	0	0	0	0.0
VIOLA	6	5	1	0	0	1	16.7
VISCARIA	1	1	0	0	0	0	0.0
WHITE EVENING PRIMROSE	1	1	0	0	0	0	0.0
ZINNIA	60	56	4	0	0	4	6.7
TOTALS	769	706	58	0	5	63	8.19%

SEED KIND TESTED	FLOWER MIXTURES						
	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURE, FLOWER	39	24	8	3	4	15	38.5
TOTALS	39	24	8	3	4	15	38.4

SEED KIND TESTED	LAWN MIXTURES						
	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURE, LAWN	187	129	26	1	31	58	31.0
TOTALS	187	129	26	1	31	58	31.0

SEED KIND TESTED	PASTURE MIXTURES						
	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURE, CONSERVATION	18	5	8	0	5	13	72.2
MIXTURE, PASTURE	10	6	1	0	3	4	40.0
TOTALS	28	11	9	0	8	17	60.7

SEED KIND TESTED	VEGETABLE SEEDS						
	Total	CL	SV	TV	MV	#VIL	%VIL
ARTICHOKE	1	1	0	0	0	0	0.0
ARUGULA (RUGULA)	7	7	0	0	0	0	0.0
ASPARAGUS	1	0	1	0	0	1	100.0
ASPARAGUS BEAN	1	1	0	0	0	0	0.0
BASIL	36	36	0	0	0	0	0.0
BEETS	25	24	1	0	0	1	4.0
BORAGE	1	1	0	0	0	0	0.0
BROCCOLI	14	14	0	0	0	0	0.0
BROCCOLI RAAB	1	1	0	0	0	0	0.0
BRUSSELS-SPROUTS	2	2	0	0	0	0	0.0
CABBAGE	13	12	0	1	0	1	7.7
CABBAGE, CHINESE	2	2	0	0	0	0	0.0
CANTALOUPE	24	24	0	0	0	0	0.0
CARAWAY	1	1	0	0	0	0	0.0
CARROT	52	52	0	0	0	0	0.0
CATGRASS	2	2	0	0	0	0	0.0
CATNIP	4	4	0	0	0	0	0.0
CAULIFLOWER	6	4	1	0	1	2	33.3
CELERY	2	2	0	0	0	0	0.0
CHAMOMILE, ANNUAL	2	2	0	0	0	0	0.0
CHAMOMILE, ROMAN	2	2	0	0	0	0	0.0
CHERVIL	1	1	0	0	0	0	0.0
CHIVES	11	8	3	0	0	3	27.3
CILANTRO	4	4	0	0	0	0	0.0
COLLARDS	8	8	0	0	0	0	0.0
CORIANDER	5	4	1	0	0	1	20.0
CORN, ORNAMENTAL	1	1	0	0	0	0	0.0
CORNSALAD	1	1	0	0	0	0	0.0
COWPEA	2	2	0	0	0	0	0.0
CUCUMBER	63	63	0	0	0	0	0.0

SEED KIND TESTED	VEGETABLE SEEDS CONTINUED						
	Total	CL	SV	TV	MV	#VIL	%VIL
DILL	12	12	0	0	0	0	0.0
EGGPLANT	10	10	0	0	0	0	0.0
ENDIVE	3	3	0	0	0	0	0.0
FENNEL, FLORENCE	2	2	0	0	0	0	0.0
GARDEN BEAN	66	54	10	0	2	12	18.2
GERMAN CHAMOMILE	1	1	0	0	0	0	0.0
GOURD, LARGE-SEEDED	4	4	0	0	0	0	0.0
GOURD, MIXED	2	2	0	0	0	0	0.0
GOURD, SMALL SEEDED	2	2	0	0	0	0	0.0
HONEY DEW	1	1	0	0	0	0	0.0
KALE	9	9	0	0	0	0	0.0
KOHLRABI	4	4	0	0	0	0	0.0
LAVENDER	9	9	0	0	0	0	0.0
LEEK	1	1	0	0	0	0	0.0
LEMON BALM	1	1	0	0	0	0	0.0
LETTUCE	63	58	5	0	0	5	7.9
LIMA BEAN	4	2	2	0	0	2	50.0
MELONS	15	15	0	0	0	0	0.0
MESCLUN	1	1	0	0	0	0	0.0
MUNG BEAN	2	2	0	0	0	0	0.0
MUSTARD	5	4	1	0	0	0	20.0
OKRA	5	5	0	0	0	0	0.0
ONION	15	13	2	0	0	2	13.3
OREGANO	7	5	2	0	0	02	28.6
ORIENTAL GREENS	1	1	0	0	0	0	0.0
PAKCHOI	5	5	0	0	0	0	0.0
PARSLEY	16	16	0	0	0	0	0.0
PARSNIP	2	2	0	0	0	0	0.0
PEA, GARDEN	36	30	4	0	2	6	16.7
PEANUT	1	0	1	0	0	1	100.0
PEPPER	82	76	4	0	2	6	7.3
POPCORN	1	1	0	0	0	0	0.0
PUMPKIN	23	22	1	0	0	1	4.3
RADISH	40	40	0	0	0	0	0.0
ROMAN CHAMOMILE	1	1	0	0	0	0	0.0
ROSEMARY	3	3	0	0	0	0	0.0
RUTABAGA	1	1	0	0	0	0	0.0
SAGE	4	4	0	0	0	0	0.0
SAVORY, SUMMER	2	2	0	0	0	0	0.0

SEED KIND TESTED	VEGETABLE SEEDS CONTINUED						
	Total	CL	SV	TV	MV	#VIL	%VIL
SPEARMINT	3	3	0	0	0	0	0.0
SPINACH	24	24	0	0	0	0	0.0
SQUASH	57	55	1	0	1	2	3.5
STEVIA	3	2	1	0	0	1	33.3
STRAWBERRY	1	1	0	0	0	0	0.0
SWEET BASIL	9	8	0	1	0	1	11.1
SWEET CORN	48	42	5	1	0	6	12.5
SWEET MARJORAM	3	3	0	0	0	0	0.0
SWISS CHARD	12	11	1	0	0	1	8.3
THYME	7	5	1	1	0	2	28.6
TOMATILLO	2	2	0	0	0	0	0.0
TOMATO	85	85	0	0	0	0	0.0
TURNIP	19	19	0	0	0	0	0.0
WATERCRESS	1	1	0	0	0	0	0.0
WATERMELON	19	18	0	0	1	1	5.3
TOTALS	1054	995	48	4	7	59	5.60

SEED KIND TESTED	VEGETABLE MIXTURES						
	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURES	23	17	0	4	2	6	26.1

SEED KIND TESTED	VEGETABLE KITS						
	Total	CL	SV	TV	MV	#VIL	%VIL
KITS	9	9	0	0	0	0	0.0

SEED KIND TESTED	BIRDFOOD						
	Total	CL	SV	TV	MV	#VIL	%VIL
BIRDFOOD	19	15	4	0	0	4	21.1

SEED KIND TESTED	HEALTH FOOD						
	Total	CL	SV	TV	MV	#VIL	%VIL
HEALTH FOOD	0	0	0	0	0	0	0.0

TABLE IV

AGRICULTURAL WHOLESALE DISTRIBUTORS			AGRICULTURAL SEEDS			
			CL	SV	TV	MV
AGRICULVER INC	TRUMANSBURG	NY	1	0	0	0
AMERICAN SEED	SPRING GROVE	PA	20	4	1	0
AMTURF ENTERPRISES	CROWN POINT	IN	0	0	1	0
ANDERSONS, THE	MAUMEE	OH	0	1	0	0
BARENBRUG USA	TANGENT	OR	4	1	0	0
BENTLEY SEED CO	CAMBRIDGE	NY	1	0	0	0
BIRD HYBRIDS	TIFFIN	OH	2	0	0	0
CENTRAL FARM SUPPLY INC	WOOSTER	OH	2	2	4	0
CHEMGRO	EAST PETERSBURG	PA	14	1	0	1
D F SEEDS	DANSVILLE	MI	0	1	0	0
DOEBLER HYBRIDS	JERSEY SHORES	PA	4	3	0	0
ERNST CONSERVATION	MEADVILLE	PA	8	2	0	3
HENRY V FISHER & SONS	MALVERN	PA	1	0	0	0
F M BROWN SONS INC	SINGING SPRING	PA	13	0	0	0
F S SEEDS	YORK	PA	10	0	0	0
GARST SEED CO	SLATER	IA	2	0	0	0
GLOBAL HARVEST FOODS	SEATTLE	WA	0	1	0	0
GREENSBORO SUPPLY INC	GREENSBORO	MD	2	0	0	0
HADLEY SEED CO	HADLEY	PA	3	2	0	0
HUBNER SEED CO	WEST LEBANON	IN	3	2	0	0
HUNDLEY SEED CO	CHAMPLAIN	VA	2	0	0	0
IKEX INC	ETNA	PA	1	0	0	0

AGRICULTURAL WHOLESALE DISTRIBUTORS			AGRICULTURAL SEEDS CONTINUED			
			CL	SV	TV	MV
JMD COMPANY	BETHEL PARK	PA	2	0	1	1
KEYSTONE GROUP AG SEEDS	NEW COLUMBIA	PA	0	1	0	0
KING'S AGRISEED LLC	RONKS	PA	4	0	0	0
LEBANON SEABOARD	DENVER	PA	1	0	0	0
EDDIE MERCER	FREDERICK	MD	4	0	0	0
WI MILLER & SON	FARMDALE	OH	6	0	0	0
MONSANTO CO	ST LOUIS	MO	2	0	0	0
NORTHAMPTON COUNTY SEED	BATH	PA	12	0	0	0
PENNINGTON SEED INC OF GREENFIELD	GREENFIELD	MO	1	0	0	1
PENNINGTON SEED INC LEBANON	LEBANON	OR	1	0	0	0
PENN STATE SEED CO	FORTY-FORT	PA	8	0	0	1
PIONEER HI-BRED	JOHNSTON	IA	6	0	0	0
SCHILLINGER SEED INC	WEST DES MOINES	IA	2	0	0	0
SCHLESSMAN SEED	MILAN	OH	1	0	0	0
SCHWARTZ FARMS	CORTLAND	OH	1	0	0	0
THE SCOTTS CO	MARYSVILLE	OH	4	0	0	0
SEEDWAY LLC	HALL	NY	103	5	2	9
SEEDWAY LLC	YORK	PA	5	0	0	0
SOUTHERN STATES	RICHMOND	VA	1	0	0	0
SOUTHERN STATES	WESTFIELD	MA	1	0	0	1
STEYER SEEDS	TIFFIN	OH	3	1	0	0
SYGENTA SEEDS INC	MINNEAPOLIS	MN	4	0	0	0
T A SEEDS	AVIS	PA	3	1	0	0
THE SEED CENTER	OSTRANDER	OH	0	0	0	1
UAP NORTHEAST	PITTSFORD	NY	1	2	0	0
UNITED AGRI PRODUCTS	GREELY	CO	6	0	0	1
UNITED SEED PRODUCTION	KING OF PRUSSIA	PA	2	0	0	0

AGRICULTURAL WHOLESALE DISTRIBUTORS			AGRICULTURAL SEEDS CONTINUED			
			CL	SV	TV	MV
W-L RESEARCH	MADISON	WI	1	0	0	0
WETSEL SEED CO	KITTANNING	PA	59	3	1	4
WIMBERLY FARMS	PRINCESS ANNE	MD	3	0	0	0
TOTAL			349	33	10	23

FLOWER SEED WHOLESALE DISTRIBUTORS			FLOWER SEEDS			
			CL	SV	TV	MV
AMERICAN SEED	NORTON	MA	1	0	0	0
BENTLEY SEED CO	CAMBRIDGE	NY	9	0	0	0
BOTANICAL INTERESTS INC	BROOMFIELD	CO	1	0	0	0
W ATLEE BURPEE CO	WARMINSTER	PA	605	53	0	5
FERRY-MORSE SEED COMPANY	FULTON	KY	9	2	0	0
PLANTATION PRODUCTS	NORTON	MA	2	3	0	0
RENEE'S GARDEN	FELTON	CA	1	0	0	0
PL ROHRER & BRO INC	SMOKETOWN	PA	9	2	0	0
SEEDWAY LLC	HALL	NY	32	1	0	0
THE PAGE SEED CO	GREENE	NY	3	0	0	0
TOTAL			672	61	0	5

FLOWER SEED MIXTURES WHOLESALE DISTRIBUTORS			FLOWER SEED MIXTURES			
			CL	SV	TV	MV
AMERICAN SEED	NORTON	MA	1	0	0	0
BENTLEY SEED CO	CAMBRIDGE	NY	3	0	0	0
W ATLEE BURPEE CO	WARMINSTER	PA	14	3	0	1
CLYDE ROBIN SEED CO	CASTRO VALLEY	CA	0	2	0	0
ENCAP LLC	GREEN BAY	WI	0	0	0	1
FERRY- MORSE SEED CO	FULTON	KY	4	0	2	1

FLOWER SEED MIXTURES WHOLESALE DISTRIBUTORS			FLOWER SEED MIXTURES			
			CL	SV	TV	MV
GLOBAL HARVEST FOODS	SEATTLE	WA	0	0	1	0
LIVINGSTON SEED	COLUMBUS	OH	0	2	0	0
PENNINGTON SEED	MADISON	GA	0	1	0	0
PLANTATION PRODUCTS	NORTON	MA	1	0	0	1
SEEDWAY LLC	HALL	NY	1	0	0	0
TOTAL			24	8	3	4

LAWN SEED MIXTURES WHOLESALE DISTRIBUTORS			LAWN MIXTURES			
			CL	SV	TV	MV
AGRILANCE	YORK	PA	2	0	0	0
AMTURF ENTERPRISES LLC	CROWN POINT	IN	1	1	1	0
BARENBRUG USA	TANGENT	OR	13	0	0	1
CHEM GRO SEEDS	EAST PETERSBURG	PA	1	0	0	0
COMMERCE CORPORATION	WARRENSVILLE HGTS	OH	1	0	0	0
ENCAP LLC	GREEN BAY	WI	3	1	0	0
FERRY-MORSE SEED CO	FULTON	KY	2	0	0	0
HENRY V FISHER	MALVERN	PA	1	1	0	3
GLOBAL HARVEST FOODS	SEATTLE	WA	2	2	0	3
JONATHAN GREEN & SONS	FARMINGDALE	NJ	6	4	0	1
E H GRIFFITH	PITTSBURGH	PA	2	0	0	1
HARREL'S TURF SPECIALTY	AUBURN	MA	3	0	0	0
IKEX INC	MERCER	PA	1	0	0	0
LEBANON SEABOARD CORP	BRISTOL	IL	2	0	0	0
LEBANON SEABOARD CORP	DENVER	PA	5	2	0	6
LESCO	CLEVELAND	OH	16	1	0	3
LOFTS SEED	LAUREL	MD	2	1	0	0
MILLER COUNTRY STORE	CLARKS SUMMIT	PA	2	1	0	0
MOUNTAIN VIEW SEEDS LTD	SALEM	OR	2	0	0	0

LAWN SEED MIXTURES WHOLESALE DISTRIBUTORS			LAWN MIXTURES			
			CL	SV	TV	MV
NATIONAL SEED OF NEW JERSEY	NEW BRUNSWICK	NJ	2	0	0	0
NORTHAMPTON COUNTY SEED	BATH	PA	5	0	0	2
PENNINGTON SEED INC OF GREENFIELD	GREENFIELD	MO	12	0	0	0
PENNINGTON SEED INC	MADISON	GA	0	1	0	0
PENNINGTON SEED INC	LEBANON	OR	11	4	0	1
PENN STATE SEED CO	FORTY-FORT	PA	2	1	0	1
THE SCOTTS COMPANY	MARYSVILLE	OH	9	0	0	0
SEEDWAY LLC	HALL	NY	12	0	0	3
SOUTHERN STATES COOP	RICHMOND	VA	4	0	0	1
SOUTHERN STATES COOP	WESTFIELD	CT	1	0	0	0
SYNATEK	SOUDERTON	PA	3	0	0	4
WETSEL SEED CO	KITTANNING	PA	0	6	0	1
X-SEED	CLEAR LAKE	MN	1	0	0	0
		TOTAL	129	26	1	31

PASTURE MIXTURES WHOLESALE DISTRIBUTORS			PASTURE MIXTURES			
			CL	SV	TV	MV
BARENBRUG USA	TANGENT	OR	1	0	0	0
CENTRAL FARM SUPPLY	WOOSTER	OH	0	1	0	0
CHEMGRO SEEDS	EAST PETERSBURG	PA	2	0	0	0
ERNST CONSERVATION	MEADVILLE	PA	2	1	0	1
FERRY-MORSE SEED CO	FULTON	KY	0	0	0	1
IKEX INC	MIDDLESEX	NC	1	0	0	0
KING'S AGRISEED LLC	RONKS	PA	2	0	0	0
SEEDWAY INC	HALL	NY	2	0	0	0
WETSEL SEED CO	KITTANNING	PA	1	7	0	6
		TOTAL	11	9	0	8

VEGETABLE WHOLESALE DISTRIBUTORS		VEGETABLE SEEDS				
			CL	SV	TV	MV
ABBOTT & COBB INC	FEASTERVILLE	PA	120	6	0	4
AMERICAN SEED	NORTON	MA	1	0	0	0
BENTLEY SEED CO	CAMBRIDGE	NY	4	0	0	0
W ATLEE BURPEE CO	WARMINSTER	PA	662	33	0	4
COOK'S GARDEN SEEDS	WARMINSTER	PA	46	1	0	0
CROSMAN SEED CORP	EAST ROCHESTER	NY	1	0	1	0
FERRY-MORSE SEED COMPANY	FULTON	KY	21	0	1	0
FRANCHI SEMENTI	GROSSOBIO	IT	0	1	0	0
FRANKFERD FARM FOOD	SAXONBURG	PA	1	0	0	0
LIVINGSTON SEED COMPANY	COLUMBUS	OH	1	0	0	0
NK LAWN & GARDEN CO	NORTON	MA	2	0	0	0
OUTSTANDING SEED	MONACA	PA	1	0	0	0
PAGE SEED COMPANY	GREENE	NY	7	1	0	0
PENN STATE SEED	FORTY FORT	PA	5	1	0	0
PHILIPS SEED CO	GREENCASTLE	PA	4	1	0	0
PLANTATION PRODUCTS	NORTON	MA	7	0	0	1
PROMOSEEDS LTD	ATLANTA	GA	3	0	0	1
P L ROHRER & BRO INC	SMOKETOWN	PA	50	0	0	0
SAUDER'S NURSERY LLC	EAST EARL	PA	0	1	2	0
SEEDWAY LLC	HALL	NY	57	2	0	0
THE CHARLES HART SEED CO	WETHERSFIELD	CT	2	0	0	0
TRIPLE M SEEDS	NEW HOLLAND	PA	0	1	0	0
WEEKS SEED CO	GREENCASTLE	PA	1	0	0	0
	TOTAL		877	48	4	10

VEGETABLE KIT WHOLESALE DISTRIBUTORS		VEGETABLE KITS				
			CL	SV	TV	MV
W ATLEE BURPEE	WARMINSTER	PA	4	0	0	0
COOK'S GARDEN SEEDS	WARMINSTER	PA	4	0	0	0
	TOTAL		8	0	0	0

VEGETABLE MIXTURES WHOLESALE DISTRIBUTORS		VEGETABLE MIXTURES				
			CL	SV	TV	MV
W ATLEE BURPEE CO	WARMINSTER	PA	14	3	0	2
COOKS GARDEN SEEDS	WARMINSTER	PA	1	0	0	0
	TOTAL		15	3	0	2

BIRDFOOD WHOLESALE DISTRIBUTORS		BIRDFOOD				
			CL	SV	TV	MV
ALBION MILLS	ALBION	PA	1	0	0	0
ALBRIGHT'S MILL	MILL HALL	PA	1	0	0	0
CHATHAM RUN FEED MILL INC	LOCK HAVEN	PA	2	0	0	0
CLARK'S FEED MILLS	SHAMOKIN	PA	1	0	0	0
KNITTLE & FREY AG CENTER	WILLIAMSPORT	PA	2	0	0	0
MACKNIGHT'S AGWAY	WESTFIELD	PA	5	0	0	0
MIFFLINBURG FARMERS EXCHANGE	MIFFLINBURG	PA	2	1	0	0
MOON'S FARM YARD	ULYSSES	PA	0	1	0	0
MOORE FARMS FEED MILL	JERSEY SHORE	PA	0	1	0	0
		Total	14	3	0	0

TABLE V

Number of Violations and Reason for Discrepancy

Number of
Violations

104	Components out of tolerance
173	Germination Percentage out of Tolerance
22	Prohibited Noxious Weeds
12	Restricted Noxious Weeds
11	Undesirable Grass Seed out of Tolerance
22	Improper Format
5	No "Sell By Date"
1	Exceeded .50% Undesirable Grass Seed
1	Exceeded 1% Total Weed Seed

Note: Some samples had more than one violation.

SEED CERTIFICATION
TABLE VI
SUMMARY OF FIELD INSPECTIONS

CROP	VARIETY	FOUNDATION	REGISTERED	CERTIFIED	Q/A
*Crownvetch	Penngift	22		110	
Oats, Spring	Armor	----	50	416	
	Hercules	----	15	256	
	Noble	----	----	180	
	Rodeo	----	----	134	
	Vista	----	16	----	
Potatoes	Chieftain	----	----	5	
	Eva	----	----	15	
	LaChipper	----	----	38	
	NY 129	----	----	3	
	Reba	----	----	27	
	Red La Soda	----	----	117	
	Snowden	----	----	17	
Sod Mixes				13,000 lbs	
Sod		----	----	----	
Wheat, Winter	Bravo	----	----	125	
	Cooper	----	----	35	
	Hopewell	----	----	160	
	Jackson	----	----	215	
	FS621 (BRAND)	----	----	----	500
	SS 550 (BRAND)	----	----	----	220
	SW50 (BRAND)	----	----	----	325
	SW8302 (BRAND)	----	----	----	188
	SW8309 (BRAND)	----	----	----	150
Rye, Winter	Aroostook	----	21	91	
TOTALS		22	117	2080	1383

The above acreage has passed the field inspection requirements.

- * Seed from this acreage must still meet mechanical standards to complete certification.
- * These established stands are not field inspected, cleaned seed is officially sampled by an inspector.