

2006 SEED REPORT

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF AGRICULTURE

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## SEED REPORT - 2006

This is a report of the activities of the Seed Division from July 1, 2005 to June 30, 2006. 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 at: [www.agriculture.state.pa.us](http://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).

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 \$19,568.10 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 American Association of 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 7,509 samples, which required 10,801 separate tests. (See Table I). Plant Industry Inspectors submitted 2,506 regulatory seed samples for enforcement of the Seed Act. Farmers, wholesale seedsmen and retail outlets submitted 4,639 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 279 samples to determine if the seed met their standards or specifications. A total of \$48,827.00 in fees was charged for this service.

**TABLE I**

Classification of samples by kind and numbers of tests involved.

<b>Number of Samples</b>	<b>Kinds</b>	<b>Purity</b>	<b>Noxious Weed Examinations</b>	<b>Germinations*</b>
1903	Agricultural Seeds	590	998	1,849
3207	Vegetable Seeds	2	3	3,225
1256	Flower Seeds	7	7	1,249
747	Lawn Mixtures	279	347	690
267	Pasture Mixtures	41	118	194
40	Flower Mixtures	13	2	38
40	Birdfood	0	5	0
13	Tree Seed	0	0	4
6	Vegetable kits	0	0	6
10	Health Food	0	10	10
7,509	TOTALS	932	1,490	7,265

<b>Other Tests</b>	
Ryegrass fluorescence	357
400 Seed Counts on bluegrass	326
Oats fluorescence	100
Cold test	184
Interstate Noxious weed examination	67
Examinations of Farm Show Exhibits	40
Tetrazolium test	24
GMO tests	55
Miscellaneous Tests	8
TOTAL TESTS	10,801

\*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 2,506 seed samples. A total of 355 or 14.1% of these samples were found to be in violation of the Act. The inspectors also placed 615 lots of seed (10,027 containers) under "Stop Sale" at 83 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		
		2005-2006	2004-2005	2003-2004
Agricultural	582	15.80%	7.91%	14.75%
Vegetable	1049	5.45%	5.02%	3.86%
Flower	496	19.15%	5.54%	8.18%
Lawn Mixtures	267	31.83%	29.79%	31.15%
Pasture Mixtures	37	13.51%	77.77%	52.05%
Flower Mixtures	45	30.30%	28.57%	30.77%
Tree	0	0.00%	0.00%	100.00%
Birdfood	5	0.00%	4.76%	14.28%
Health Food	5	50.0%	0.00%	0.00%
Vegetable Kits	20	66.66%	11.76%	9.09%
<b>TOTALS</b>	<b>2506</b>	<b>14.10%</b>	<b>8.40%</b>	<b>12.67%</b>

\* Samples collected by seed inspectors in 2005-2006.

**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	17	14	1	1	1	3	17.6
ALKALIGASS, WEEPING	3	2	0	1	0	1	33.3
ALSIKE CLOVER	5	0	0	0	0	0	0.0
ANNUAL RYEGRASS	29	27	2	0	0	2	6.9
BARLEY	14	14	0	0	0	0	0.0
BIRDSFOOT TREFOIL	8	3	2	1	2	5	69.4
BUCKWHEAT	2	2	0	0	0	0	0.0
CHEWINGS FESCUE	7	7	0	0	0	0	0.0
CHICORY	1	0	0	1	0	1	100.0
CORN, HYBRID FIELD	29	29	0	0	0	0	0.0
CROWN VETCH	7	6	0	1	0	1	14.3
HAIRY VETCH	1	1	0	0	0	0	0.0
HARD FESCUE	21	18	1	2	0	3	14.3
ITALIAN RYEGRASS	2	0	0	0	0	0	0.0
KENTUCKY BLUEGRASS	93	66	14	5	8	27	29.0
LADINO CLOVER	3	0	0	0	0	0	0.0
LESPEDEZA, KOREAN	1	1	0	0	0	0	0.0
OAT	14	13	1	0	0	1	7.1
ORCHARDGRASS	12	11	1	0	0	1	8.3
PERENNIAL RYEGRASS	76	68	2	3	3	8	10.5
POA TRIVIALIS	2	1	1	0	0	1	50.0
RED CLOVER	12	10	0	1	1	2	16.7
RED FESCUE	28	26	1	1	0	2	7.1
REDTOP	6	4	1	1	0	2	33.3
REED CANARYGRASS	1	1	0	0	0	0	0.0
RYE	18	16	2	0	0	2	11.1
RYEGRASS, INTERMEDIATE	5	5	0	0	0	0	0.0

SEED KIND TESTED CONTINUED	AGRICULTURAL SEED						
	Total	CL	SV	TV	MV	#VIL	%VIL
SHEEP FESCUE	1	1	0	0	0	0	0.0
SOYBEAN	38	32	4	0	2	6	15.8
SWEET CLOVER, YELLOW	2	1	0	1	0	1	50.0
SWITCHGRASS	4	1	3	0	0	3	75.0
TALL FESCUE	45	40	2	0	3	5	11.1
TIMOTHY	16	16	0	0	0	0	0.0
TRITICALE	1	1	0	0	0	0	0.0
WHEAT	29	27	2	0	0	2	6.9
WHITE CLOVER	8	6	1	0	1	2	25.0
<b>TOTALS</b>	<b>582</b>	<b>470</b>	<b>41</b>	<b>19</b>	<b>21</b>	<b>81</b>	<b>13.9</b>

SEED KIND TESTED	FLOWER SEEDS						
	Total	CL	SV	TV	MV	#VIL	%VIL
ACHILLEA	1	1	0	0	0	0	0.0
AGASTACHE-GIANT HYSOP	2	1	1	0	0	1	50.0
AGERATUM	1	1	0	0	0	0	0.0
AGROSTEMMA	1	1	0	0	0	0	0.0
ALYSSUM MARITIMUM	14	14	0	0	0	0	0.0
AMARANTH, GLOBE	5	5	0	0	0	0	0.0
AMARANTHUS	1	1	0	0	0	0	0.0
ANTIRRHINUM	1	1	0	0	0	0	0.0
ASCLEPIAS	1	1	0	0	0	0	0.0
ASTERS	14	14	0	0	0	0	0.0
AUBRIETA	2	2	0	0	0	0	0.0
BABY BLUE EYES	1	1	0	0	0	0	0.0
BABY'S BREATH	5	5	0	0	0	0	0.0
BACHELOR'S BUTTON	9	9	0	0	0	0	0.0
BALSAM	1	1	0	0	0	0	0.0
BEGONIA	1	0	1	0	0	1	100.0
BELLS OF IRELAND	2	2	0	0	0	0	0.0
BLACK-EYE SUSAN VINE	2	2	0	0	0	0	0.0
BLACKEYED SUSAN	2	2	0	0	0	0	0.0
BLUE FESCUE	1	1	0	0	0	0	0.0
BUTTERFLY FLOWER	1	1	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	2	2	0	0	0	0	0.0
CALIFORNIA POPPY	4	4	0	0	0	0	0.0
CANDYTUFT	3	3	0	0	0	0	0.0
CANTERBERRY BELLS	2	2	0	0	0	0	0.0

SEED KIND TESTED CONTINUED	FLOWER SEEDS CONTINUED						
	Total	CL	SV	TV	MV	#VIL	%VIL
CARDINAL CLIMBER	1	1	0	0	0	0	0.0
CARNATION	2	2	0	0	0	0	0.0
CELOSIA	3	3	0	0	0	0	0.0
CERINTHE	1	1	0	0	0	0	0.0
CHINESE LANTERNS	2	2	0	0	0	0	0.0
CHRYSANTHEMUM	1	1	0	0	0	0	0.0
CLEOME	2	1	1	0	0	1	50.0
COBAEA CUP-AND-SAUCE VINE	1	0	1	0	0	1	100.0
COCKSCOMB	1	1	0	0	0	0	0.0
COLEUS	1	1	0	0	0	0	0.0
COLUMBINE	3	3	0	0	0	0	0.0
CONEFLOWER, PURPLE	1	1	0	0	0	0	0.0
CONVOLVULUS	3	3	0	0	0	0	0.0
COREOPSIS	4	4	0	0	0	0	0.0
CORN, ORNAMENTAL	1	1	0	0	0	0	0.0
CORNFLOWER	2	2	0	0	0	0	0.0
COSMOS	9	9	0	0	0	0	0.0
CYNOGLOSSUM	2	2	0	0	0	0	0.0
CYPRESS VINE	2	2	0	0	0	0	0.0
DAHLIA	1	1	0	0	0	0	0.0
DAISY	7	7	0	0	0	0	0.0
DAISY, ENGLISH	1	1	0	0	0	0	0.0
DAISY, PAINTED	2	2	0	0	0	0	0.0
DELPHINIUM	9	7	2	0	0	2	22.2
DIANTHUS	5	5	0	0	0	0	0.0
DUSTY MILLER	1	1	0	0	0	0	0.0
ECHINACEA	2	2	0	0	0	0	0.0
EVERLASTING	1	1	0	0	0	0	0.0
FALSE QUEEN ANNE'S LACE	1	1	0	0	0	0	0.0
FEATHERTOP GRASS	1	1	0	0	0	0	0.0
FLANDERS POPPY	1	1	0	0	0	0	0.0
FLAX, PERENNIAL	3	2	1	0	0	1	33.3
FLOWERING CABBAGE	1	1	0	0	0	0	0.0
FORGET-ME-NOT	4	2	2	0	0	2	50.0
FORGET-ME-NOT, CHINESE	5	5	0	0	0	0	0.0
FOUR O'CLOCK	5	4	1	0	0	1	20.0
FOXGLOVE	8	8	0	0	0	0	0.0
GAILLARDIA	4	4	0	0	0	0	0.0
GAZANIA	1	1	0	0	0	0	0.0
GERANIUM	3	3	0	0	0	0	0.0
GLORIOSA DAISY	2	2	0	0	0	0	0.0
GOMPHRENA	2	2	0	0	0	0	0.0
GOURD, LARGE-SEEDED	1	1	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
HARE'S TAIL	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
HELICHRYSUM	1	0	1	0	0	1	100.0
HELIOTROPE	3	3	0	0	0	0	0.0
HOLLYHOCK	5	5	0	0	0	0	0.0
HONESTY, ANNUAL	2	2	0	0	0	0	0.0
IMPATIENS	12	11	1	0	0	1	8.3
IPOMOEA	1	1	0	0	0	0	0.0
IPOMOPSIS	1	1	0	0	0	0	0.0
JASIONE	1	1	0	0	0	0	0.0
LADY'S MANTLE	1	0	1	0	0	1	100.0
LARKSPUR	5	5	0	0	0	0	0.0
LAVATERA	1	1	0	0	0	0	0.0
LAVENDER	2	2	0	0	0	0	0.0
LOBELIA	2	2	0	0	0	0	0.0
LOVE-LIES-BLEEDING	1	1	0	0	0	0	0.0
LUNARIA	1	1	0	0	0	0	0.0
LUPINE	3	2	1	0	0	1	33.3
LYCHNIS	1	1	0	0	0	0	0.0
MARIGOLDS, FRENCH	6	6	0	0	0	0	0.0
MARIGOLDS	29	26	2	0	1	3	10.3
MELAMPODIUM	1	1	0	0	0	0	0.0
MEXICAN SUNFLOWER	2	2	0	0	0	0	0.0
MONARDA	1	1	0	0	0	0	0.0
MOONFLOWER	2	2	0	0	0	0	0.0
MORNING GLORY	14	14	0	0	0	0	0.0
NASTURTIUM	10	10	0	0	0	0	0.0
NEMOPHILA	1	1	0	0	0	0	0.0
NICOTIANA	4	4	0	0	0	0	0.0
NIGELLA	1	1	0	0	0	0	0.0
ORIENTAL POPPY	4	4	0	0	0	0	0.0
PANSY, COMMON	2	2	0	0	0	0	0.0
PAR-CEL	1	1	0	0	0	0	0.0
PASSION FLOWER, SOFTLEAF	1	1	0	0	0	0	0.0
PENSTEMON	1	1	0	0	0	0	0.0
PETUNIAS	5	5	0	0	0	0	0.0
PHLOX	4	4	0	0	0	0	0.0
POPPY	8	8	0	0	0	0	0.0
PORTULACA	2	2	0	0	0	0	0.0
PURPLE BELLS	1	1	0	0	0	0	0.0
RUDBECKIA	3	3	0	0	0	0	0.0
SALPIGLOSSIS	1	1	0	0	0	0	0.0
SALVIA	2	2	0	0	0	0	0.0
SCABIOSA	2	2	0	0	0	0	0.0
SCARLET SAGE	1	1	0	0	0	0	0.0
SEA LAVENDER	1	1	0	0	0	0	0.0
SHASTA DIASY	3	3	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	7	7	0	0	0	0	0.0
SPANISH FLAG	2	2	0	0	0	0	0.0
STATIC	3	3	0	0	0	0	0.0
STEVIA	1	1	0	0	0	0	0.0
STOCK	2	2	0	0	0	0	0.0
STRAWFLOWER	3	3	0	0	0	0	0.0
SUNFLOWER	29	26	2	1	0	3	10.3
SWEET PEA	11	6	5	0	0	5	45.5
SWEET WILLIAM	4	4	0	0	0	0	0.0
TEXAS BLUEBONNET	1	1	0	0	0	0	0.0
THUNBERGIA	1	1	0	0	0	0	0.0
TITHONIA	2	2	0	0	0	0	0.0
TRITOMA	1	1	0	0	0	0	0.0
VERBENA	2	1	1	0	0	1	50.0
VERONICA	1	1	0	0	0	0	0.0
VINCA	1	1	0	0	0	0	0.0
VIOLA	2	2	0	0	0	0	0.0
XERANTHEMUM	1	1	0	0	0	0	0.0
ZINNIA	45	42	2	0	1	3	6.6
<b>TOTALS</b>	<b>496</b>	<b>466</b>	<b>26</b>	<b>1</b>	<b>3</b>	<b>30</b>	<b>6.04%</b>

SEED KIND TESTED	FLOWER MIXTURES						
	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURE, FLOWER	45	34	11	0	0	11	24.4
<b>TOTALS</b>	<b>45</b>	<b>34</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>24.4</b>

SEED KIND TESTED	LAWN MIXTURES						
	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURE, LAWN	267	184	34	17	32	83	31.0
<b>TOTALS</b>	<b>267</b>	<b>184</b>	<b>34</b>	<b>17</b>	<b>32</b>	<b>83</b>	<b>31.0</b>

SEED KIND TESTED	PASTURE MIXTURES						
	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURE, CONSERVATION	7	0	5	1	1	7	100.0
MIXTURE, PASTURE	30	19	4	3	4	11	36.6
<b>TOTALS</b>	<b>37</b>	<b>19</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>18</b>	<b>48.6</b>

SEED KIND TESTED	VEGETABLE SEEDS						
	Total	CL	SV	TV	MV	#VIL	%VIL
ALFALFA	1	0	0	1	0	1	100.0
ARTICHOKE	2	1	1	0	0	1	50.0
ARUGULA (RUGULA)	9	9	0	0	0	0	0.0
ASPARAGUS	1	1	0	0	0	0	0.0
ASPARAGUS BEAN	3	3	0	0	0	0	0.0
BASIL	34	34	0	0	0	0	0.0
BEAN, DRY	1	1	0	0	0	0	0.0
BEETS	29	27	1	1	0	2	6.9
BROCCOLI	11	11	0	0	0	0	0.0
BROCCOLI RAAB	2	2	0	0	0	0	0.0
BRUSSELS-SPROUTS	3	3	0	0	0	0	0.0
CABBAGE	21	20	1	0	0	1	4.8
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	36	36	0	0	0	0	0.0
CATNIP	2	2	0	0	0	0	0.0
CAULIFLOWER	6	6	0	0	0	0	0.0
CELERIAC	2	2	0	0	0	0	0.0
CELERY	4	4	0	0	0	0	0.0
CHAMOMILE, ANNUAL	1	1	0	0	0	0	0.0
CHAMOMILE, ROMAN	2	2	0	0	0	0	0.0
CHERVIL	3	3	0	0	0	0	0.0
CHICORY	2	2	0	0	0	0	0.0
CHIVES	8	6	2	0	0	2	25.0
CILANTRO	3	3	0	0	0	0	0.0
CLAYTONIA, MINERS LETTUCE	1	1	0	0	0	0	0.0
COLLARDS	14	14	0	0	0	0	0.0
CORIANDER	7	7	0	0	0	0	0.0
CORNSALAD	1	1	0	0	0	0	0.0
CRESS	2	2	0	0	0	0	0.0
CRESS, UPLAND	1	1	0	0	0	0	0.0
CUCUMBER	38	37	0	1	0	1	2.6

SEED KIND TESTED	VEGETABLE SEEDS CONTINUED						
	Total	CL	SV	TV	MV	#VIL	%VIL
DANDELION	1	1	0	0	0	0	0.0
DILL	9	9	0	0	0	0	0.0
EGGPLANT	10	9	0	1	0	1	20.0
ENDIVE	7	7	0	0	0	0	0.0
ESCAROLE	1	1	0	0	0	0	0.0
FENNEL, FLORENCE	3	3	0	0	0	0	0.0
GARDEN BEAN	51	47	2	1	1	4	7.8
GERMAN CHAMOMILE	1	1	0	0	0	0	0.0
GOURD, LARGE-SEEDED	1	1	0	0	0	0	0.0
GOURD, MIXED	4	4	0	0	0	0	0.0
GOURD, SMALL SEEDED	1	1	0	0	0	0	0.0
GOURDS, LUFFA	1	1	0	0	0	0	0.0
KALE	13	13	0	0	0	0	0.0
KOHLRABI	8	8	0	0	0	0	0.0
LAVENDER	3	3	0	0	0	0	0.0
LEEK	5	5	0	0	0	0	0.0
LEMON BALM	1	1	0	0	0	0	0.0
LEMON BASIL	1	1	0	0	0	0	0.0
LETTUCE	88	83	4	1	0	5	5.7
LIMA BEAN	7	6	1	0	0	1	14.3
MACHE	38	37	0	1	0	1	2.6
MELONS	7	7	0	0	0	0	0.0
MILLET	3	3	0	0	0	0	0.0
MUNG BEAN	1	1	0	0	0	0	0.0
MUSTARD	7	7	0	0	0	0	0.0
OKRA	6	6	0	0	0	0	0.0
ONION	16	16	0	0	0	0	0.0
OREGANO	7	5	1	1	0	2	28.6
ORIENTAL GREENS	1	1	0	0	0	0	0.0
PAKCHOI	4	4	0	0	0	0	0.0
PAR-CEL	1	1	0	0	0	0	0.0
PARSLEY	19	19	0	0	0	0	0.0
PARSNIP	1	1	0	0	0	0	0.0
PEA, GARDEN	29	29	0	0	0	0	0.0
PEPPER	59	57	2	0	0	2	3.4
POPCORN	2	2	0	0	0	0	0.0
PUMPKIN	30	29	1	0	0	1	3.3
RADICCIO	4	4	0	0	0	0	0.0
RADISH	34	31	1	2	0	3	8.8
RAPE	1	1	0	0	0	0	0.0
ROSEMARY	1	1	0	0	0	0	0.0
RUE	1	1	0	0	0	0	0.0
RUTABAGA	3	3	0	0	0	0	0.0
SAGE	4	4	0	0	0	0	0.0
SALSIFY	1	1	0	0	0	0	0.0
SAVORY, SUMMER	2	2	0	0	0	0	0.0

	VEGETABLE SEEDS CONTINUED						
SEED KIND TESTED	Total	CL	SV	TV	MV	#VIL	%VIL
SCALLION	2	2	0	0	0	0	0.0
SORREL	1	1	0	0	0	0	0.0
SOYBEAN	1	1	0	0	0	0	0.0
SPEARMINT	1	1	0	0	0	0	0.0
SPINACH	22	21	0	1	0	1	4.5
SQUASH	43	41	1	0	1	2	4.7
STRAWBERRY	1	1	0	0	0	0	0.0
SUNFLOWER	15	15	0	0	0	0	0.0
SWEET BASIL	5	5	0	0	0	0	0.0
SWEET CORN	48	48	0	0	0	0	0.0
SWEET MARJORAM	4	4	0	0	0	0	0.0
SWISS CHARD	14	14	0	0	0	0	0.0
THYME	7	7	0	0	0	0	0.0
TOMATILLO	1	1	0	0	0	0	0.0
TOMATO	71	71	0	0	0	0	0.0
TURNIP	15	15	0	0	0	0	0.0
WATERCRESS	1	1	0	0	0	0	0.0
WATERMELON	22	22	0	0	0	0	0.0
<b>TOTALS</b>	<b>1049</b>	<b>1018</b>	<b>18</b>	<b>11</b>	<b>2</b>	<b>31</b>	<b>3.00%</b>

	VEGETABLE MIXTURES						
SEED KIND TESTED	Total	CL	SV	TV	MV	#VIL	%VIL
MIXTURES	14	10	4	0	0	4	28.6

	VEGETABLE KITS						
SEED KIND TESTED	Total	CL	SV	TV	MV	#VIL	%VIL
KITS	6	5	0	1	0	1	16.6

	BIRDFOOD						
SEED KIND TESTED	Total	CL	SV	TV	MV	#VIL	%VIL
BIRDFOOD	5	5	0	0	0	0	0.0

	HEALTH FOOD						
SEED KIND TESTED	Total	CL	SV	TV	MV	#VIL	%VIL
HEALTH FOOD	5	3	1	1	0	2	40.0

TABLE IV

AGRICULTURAL WHOLESALE DISTRIBUTORS			AGRICULTURAL SEEDS			
			CL	SV	TV	MV
AARON'S OUTDOOR PRODUCTS INC	MOUNTAIN TOP	PA	0	0	1	0
AGRICULVER INC	TRUMANSBURG	NY	3	0	0	0
AMERICAN SEED	SPRING GROVE	PA	11	1	1	0
AMERICAN SEED-NORTON	NORTON	MA	1	0	0	0
ANDRE & SONS INC	MONTROSE	PA	6	0	0	0
BARENBRUG USA	TANGENT	OR	11	0	0	0
N O BONSALE SONS	MILLERSTOWN	PA	1	0	0	0
BOYLE BROS INC	QUEEN ANNE	MD	5	0	0	0
CENTRAL FARM SUPPLY INC	WOOSTER	OH	1	0	0	1
CHEMGRO	EAST PETERSBURG	PA	31	0	0	0
DEKALB GENETICS	DEKALB	IL	1	0	0	0
DISCOUNT FARM CENTER	WATERTOWN	SD	1	0	0	0
DOEBLER HYBRIDS	JERSEY SHORES	PA	9	0	0	0
ERNST CONSERVATION	MEADVILLE	PA	14	1	0	1
FERRY-MORSE	FULTON	KY	3	0	0	0
HENRY V FISHER & SONS	MALVERN	PA	1	0	0	0
F S SEEDS	YORK	PA	9	1	0	0
GARST SEED CO	SLATER	IA	1	0	0	0
GLOBAL HARVEST FOODS	SEATTLE	WA	1	0	0	0
GRIES SEED FARMS	FREMONT	OH	3	0	0	0
HADLEY SEED CO	HADLEY	PA	2	0	0	0
HISTAND SUPPLY	WYCOMBE	PA	5	1	0	0
HUBNER SEED CO	WEST LEBANON	IN	1	0	0	0
HUNDLEY SEED CO	CHAMPLAIN	VA	2	0	0	0
HYTEST SEEDS	FORT DODGE	IA	3	0	0	0
IKEX INC	ETNA	PA	1	0	0	0

AGRICULTURAL WHOLESALE DISTRIBUTORS			AGRICULTURAL SEEDS CONTINUED			
			CL	SV	TV	MV
IRENE'S HEALTH BAKERY	GARRTTSVILLE	OH	0	2	0	0
JUDSON'S	COLUMBIA CROSSINGS	PA	2	0	0	0
KING'S AGRISEED LLC	RONKS	PA	1	0	0	0
LAND O'LAKES INC	ST PAUL	MN	4	0	0	0
LEBANON SEABOARD	BRISTOL	IL	17	2	0	0
LEBANON SEABOARD	DENVER	PA	1	1	0	0
LITTLE BRITAIN AGRI SUPPLY	QUARRYVILLE	PA	1	0	0	0
MID ATLANTIC SEEDS	YORK	PA	4	1	0	2
WI MILLER & SON	FARMDALE	OH	5	0	0	0
MONSANTO CO	ST LOUIS	MO	6	0	0	0
MT VIEW SEEDS	SALEM	OR	1	0	0	0
MYCOGEN SEEDS	INDIANAPOLIS	IN	2	0	0	0
NATIONAL SEED CO OF NEW JERSEY	NEW BRUNSWICK	NJ	1	0	0	0
NORTHAMPTON COUNTY SEED	BATH	PA	14	0	0	2
PARTNER BRAND	DANSVILLE	MI	1	0	0	0
PENNINGTON SEED INC OF GREENFIELD	GREENFIELD	MO	3	1	0	0
PENNINGTON SEED	MADISON	GA	1	0	0	0
PENNINGTON SEED INC LEBANON	LEBANON	OR	2	0	0	0
PENN STATE SEED CO	FORTY-FORT	PA	15	4	0	0
PIONEER HI-BRED	JOHNSTON	IA	18	1	0	0
PREFERRED SEED CO	BUFFALO	NY	1	0	0	0
RESEARCH SEEDS INC	FORT DODGE	IA	3	0	0	0
P L ROHRER & BRO INC	SMOKETOWN	PA	15	0	0	0
SAM SCHMIDT	GIRARD	PA	0	1	0	0
THE SCOTTS CO	MARYSVILLE	OH	7	0	0	0
SEEDS INC	TEKOA	WA	0	1	0	0
SEEDWAY LLC	HALL	NY	148	13	5	12
SEEDWAY LLC	MECHANICSBURG	PA	1	0	0	0

AGRICULTURAL WHOLESALE DISTRIBUTORS			AGRICULTURAL SEEDS CONTINUED			
			CL	SV	TV	MV
SEEDWAY LLC	YORK	PA	2	0	0	0
SOUTHERN STATES	SEAFORD	DE	1	0	0	0
SOUTHERN STATES	RICHMOND	VA	4	0	0	0
SWEENEY SEED CO	KING OF PRUSSIA	PA	1	0	1	0
SYGENTA SEEDS INC	MINNEAPOLIS	MN	2	0	1	1
T A SEEDS	AVIS	PA	2	0	0	0
UNITED AGRI PRODUCTS	GREELY	CO	3	0	0	0
UNITED SEED PRODUCTION	KING OF PRUSSIA	PA	2	0	2	0
VERDICON	GREELY	CO	1	0	5	0
W-L ALFALFAS	MADISON	WI	1	0	0	0
WETSEL SEED CO	KITTANNING	PA	75	10	4	1
WETSEL SEED CO	HARRISONBURG	VA	2	0	0	0
WILLOWDALE FARMS	JEFFERSON	MD	2	0	0	0
WIMBERLY FARMS	PRINCESS ANNE	MD	3	0	0	0
		<b>TOTAL</b>	<b>582</b>	<b>41</b>	<b>20</b>	<b>20</b>

FLOWER SEED WHOLESALE DISTRIBUTORS			FLOWER SEEDS & MIXTURES			
			CL	SV	TV	MV
ADVANCE SEED CO	FULTON	KY	1	0	0	0
AMERICAN SEED	NORTON	MA	8	2	2	0
APPLEWOOD SEED CO	ARVADA	CO	3	0	0	0
BENTLEY SEED CO	CAMBRIDGE	NY	14	0	0	0
BODGER SEED CO	S ELMONTE	CA	7	0	0	1
BOTANICAL INTERESTS INC	BROOMFIELD	CO	1	0	0	0
W ATLEE BURPEE CO	WARMINSTER	PA	272	13	0	0
CLYDE ROBIN SEED CO	CASTRO VALLEY	CA	0	1	0	0
COOK'S GARDEN SEED	WARMINSTER	PA	12	0	0	0
DV BURELL SEED GROWERS	ROCKY FORD	CO	1	0	0	0

FLOWER SEED WHOLESALE DISTRIBUTORS			FLOWER SEED & MIXTURES CONTINUED			
			CL	SV	TV	MV
ENCAP LLC	GREEN BAY	WI	1	0	0	0
ENVIROMENTAL SEED PROD	LOMPOC	CA	8	1	0	1
FERRY-MORSE SEED COMPANY	FULTON	KY	13	1	0	0
GLOBAL HARVEST FOODS	SEATTLE	WA	1	0	0	0
MAGIC SPROUTS	WILLIAMSVILLE	NY	0	1	0	0
MARTHA STEWART LIVING	NEW YORK	NY	88	8	0	0
PAN AMERICAN SEED	SANTA PAULA	CA	1	0	0	0
PENNINGTON SEED	MADISON	GA	2	1	0	0
PLANTATION PRODUCTS	NORTON	MA	6	2	0	0
POTTING SHED CREATIONS	TROY	ID	1	1	0	0
PL ROHRER & BRO INC	SMOKETOWN	PA	9	1	0	0
SEEDWAY VEGETABLE LLC	ELIZABETHTOWN	PA	22	4	0	0
TARGET CORP	MINNEAPOLIS	MN	14	1	0	0
WILD WEST SEED	ALBANY	OR	1	0	0	0
<b>TOTAL</b>			<b>487</b>	<b>39</b>	<b>1</b>	<b>2</b>

LAWN SEED MIXTURES WHOLESALE DISTRIBUTORS			LAWN MIXTURES			
			CL	SV	TV	MV
AMERICAN SEED CO	SPRING GROVE	PA	6	0	0	1
BARENBRUG USA	TANGENT	OR	10	2	4	1
F M BROWN SONS INC	SINKING SPRINGS	PA	1	0	0	0
CENTRAL FARM SUPPLY	WOOSTER	OH	1	0	0	0
CHEM GRO SEEDS	EAST PETERSBURG	PA	2	0	0	0
COMMERCE CORPORATION	WARRENSVILLE HGTS	OH	0	0	1	0
DLF INTERNATIONAL SEEDS	HALSEY	OR	3	0	0	0
ENCAP LLC	GREEN BAY	WI	1	1	0	0

LAWN SEED MIXTURES WHOLESALE DISTRIBUTORS			LAWN MIXTURES			
			CL	SV	TV	MV
ERNST CONSERVATION	MEADVILLE	PA	3	0	0	0
FERRY-MORSE SEED CO	FULTON	KY	2	0	0	1
HENRY V FISHER	MALVERN	PA	11	0	1	0
FRANKLIN FEED AND SUPPLY	CHAMBERSBURG	PA	0	1	0	0
GLOBAL HARVEST FOODS	SEATTLE	WA	0	1	1	0
JONATHAN GREEN & SONS	FARMINGDALE	NJ	2	0	0	1
HARREL'S TURF SPECIALTY	AUBURN	MA	2	0	0	3
HISTAND SUPPLY	WYCOMBE	PA	2	0	0	1
IKEX INC	MERCER	PA	1	0	0	0
KING'S AGRI SEED LLC	RONKS	PA	0	1	0	0
LEBANON SEABOARD CORP	BRISTOL	IL	0	1	7	1
LEBANON SEABOARD CORP	DENVER	PA	6	3	0	2
LESCO	CLEVELAND	OH	21	1	0	0
MID ATLANTIC SEEDS	YORK	PA	8	1	0	3
NATIONAL SEED OF NEW JERSEY	NEW BRUNSWICK	NJ	4	0	1	1
NORTHAMPTON COUNTY SEED	BATH	PA	5	0	0	0
PENNINGTON SEED INC OF GREENFIELD	GREENFIELD	MO	3	0	0	0
PENNINGTON SEED INC	MADISON	GA	2	0	0	0
PENNINGTON SEED INC	LEBANON	OR	12	8	1	0
PENN STATE SEED CO	FORTY-FORT	PA	12	2	0	1
PINE VALLEY SUPPLY CORP	PHILADELPHIA	PA	6	0	0	0
P L ROHRER & BRO INC	SMOKETOWN	PA	4	1	0	0
THE SCOTTS COMPANY	MARYSVILLE	OH	14	1	0	3
SEEDWAY LLC	HALL	NY	23	11	0	9
SEEDWAY LLC	EMMAUS	PA	2	0	0	0
SOUTHERN STATES COOP	RICHMOND	VA	8	0	0	2
SOUTHERN STATES COOP	WESTFIELD	CT	2	0	1	2
SUMMIT SEED	MANTENO	IL	0	0	1	0

LAWN SEED MIXTURES WHOLESALE DISTRIBUTORS			LAWN MIXTURES			
			CL	SV	TV	MV
SYNATEK	SOUDERTON	PA	2	1	0	0
TRUGREEN-CHEMLAWN	MEMPHIS	TN	1	0	0	0
UNITED SEED PRODUCTION	KING OF PRUSSIA	PA	0	0	0	1
WETSEL SEED CO	KITTANNING	PA	13	0	0	2
		<b>TOTAL</b>	<b>194</b>	<b>36</b>	<b>18</b>	<b>38</b>

PASTURE MIXTURES WHOLESALE DISTRIBUTORS			PASTURE MIXTURES			
			CL	SV	TV	MV
AARON'S OUTDOOR PRODUCTS	MOUNTAIN TOP	PA	4	0	0	0
BARENBRUG USA	TANGENT	OR	2	0	0	0
BIO-LOGIC, MOSSY OAK	WEST POINT	MS	0	3	0	0
CHEMGRO SEEDS	EAST PETERSBURG	PA	0	0	2	0
ERNST CONSERVATION	MEADVILLE	PA	0	1	0	0
FISHER & SON	MALVERN	PA	0	0	0	1
FS SEEDS	YORK	PA	4	1	0	1
KING'S AGRISEED LLC	RONKS	PA	1	2	1	1
QUAKER BOY	ORCHARD PARK	NY	0	0	1	0
P L ROHRER & BRO INC	SMOKETOWN	PA	5	0	0	0
SEEDWAY INC	HALL	NY	3	0	0	0
SOUTHERN STATES COOP	WESTFIELD	MA	0	1	0	0
WETSEL SEED CO	KITTANNING	PA	0	0	0	2
		<b>TOTAL</b>	<b>19</b>	<b>8</b>	<b>4</b>	<b>5</b>

VEGETABLE WHOLESALE DISTRIBUTORS		VEGETABLE SEEDS				
			CL	SV	TV	MV
ABBOTT & COBB INC	FEASTERVILLE	PA	147	0	0	1
AMERICAN SEED	SPRING GROVE	PA	0	0	0	1
AMERICAN SEED	NORTON	MA	16	1	7	0
AMERICAN TAKII	SALINAS	CA	1	0	0	0
BENTLEY SEED CO	CAMBRIDGE	NY	5	0	0	0
W ATLEE BURPEE CO	WARMINSTER	PA	577	9	0	0
CHARTER SEED CO	CALDWELL	ID	1	0	0	0
CHILDS SEED CO	SAN RAFAEL	CA	1	0	0	0
CHRISEED	MT VERNON	WA	1	0	0	0
COOK'S GARDEN SEEDS	WARMINSTER	PA	120	2	0	0
CROSMAN SEED CORP	EAST ROCHESTER	NY	1	0	0	0
DORSING SEEDS INC	NYSSA	OR	1	0	0	0
FERRY-MORSE SEED COMPANY	FULTON	KY	18	0	0	0
I C LONDONS	ARGYLE	TX	0	0	1	0
D LANDRETH SEED CO	ROSEDALEE	MD	1	0	0	0
LIVINGSTON SEED COMPANY	COLUMBUS	OH	2	0	0	0
MAGIC SPROUTS	WILLIAMSVILLE	NY	1	0	0	0
MARTHA STEWART LIVING	NEW YORK	NY	66	2	0	0
NK LAWN & GARDEN CO	CHATTANOOGA	TN	1	0	0	0
PAGE SEED COMPANY	GREENE	NY	2	0	0	0
PAN AMERICAN SEED	SANTA PAULA	CA	1	0	0	0
PENN STATE SEED	FORTY FORT	PA	8	1	0	0
PLANTATION PRODUCTS	NORTON	MA	2	0	0	0
P L ROHRER & BRO INC	SMOKETOWN	PA	23	1	0	0
SEEDS BY DESIGN	WILLOWS	CA	8	0	0	0
SEEDWAY LLC	ELIZABETHTOWN	PA	71	0	1	1
SEMINIS	SATICOY	CA	1	0	0	0
SHILOH FARMS	SULPHUR SPRINGS	AR	0	1	0	0

VEGETABLE WHOLESALE DISTRIBUTORS		VEGETABLE SEEDS CONTINUED				
			CL	SV	TV	MV
TARGET CORP	MINNEAPOLIS	MN	8	0	0	0
WESTERN HYBRID SEEDS INC	HAMILTON CITY	CA	10	1	0	0
WETSEL SEED CO	KITTANNING	PA	8	0	0	0
WILD WEST SEED	ALBANY	OR	8	0	0	0
<b>TOTAL</b>			<b>1121</b>	<b>18</b>	<b>9</b>	<b>3</b>

VEGETABLE KIT WHOLESALE DISTRIBUTORS		VEGETABLE KITS				
			CL	SV	TV	MV
W ATLEE BURPEE	WARMINSTER	PA	4	0	0	0
JOSEPH ENTERPRISES	SAN FRANCISCO	CA	0	0	1	0
POTTING SHED CREATIONS	TROY	ID	1	0	0	0
<b>TOTAL</b>			<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>

BIRDFOOD WHOLESALE DISTRIBUTORS		BIRDFOOD				
			CL	SV	TV	MV
KNITTLE & FREY AG CENTER	WILLIAMSPORT	PA	2	0	0	0
MIFFLINBURG FARMERS EXCHANGE	MIFFLINBURG	PA	1	0	0	0
ROCKWELL FEED & FARM	WELLSBORO	PA	1	0	0	0
SUN SEED CO		PA	1	0	0	0
		<b>Total</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE V**

**Number of Violations and Reason for Discrepancy**

Number of  
Violations

139	Components out of tolerance
87	Germination Percentage out of Tolerance
8	Prohibited Noxious Weeds
4	Restricted Noxious Weeds
20	Undesirable Grass Seed out of Tolerance
25	Improper Format
42	No "Sell By Date"
11	Invalid Test Date
1	Seed Treatment not Labeled
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
Barley, Winter	FS 927 (BRAND)	----	----	---	242
*Crownvetch	Penngift	22		110	
Oats, Spring	Armor	----	26	460	
	Blaze	----	----	125	
	Hercules	----	101	249	
	Noble	----	----	125	
	Ogle	----	16	95	
	Rodeo	----	----	89	
Potatoes	Chieftain	----	----	5	
	Eva	----	----	33.2	
	LaChipper	----	----	38	
	NY 129	----	----	1	
	Reba	----	----	17	
	Red La Soda	----	----	125	
	Snowden	----	----	32	
	Satina	----	----	6.5	
Sod Mixes				13,500 lbs	
Sod		----	----	----	
Wheat, Winter	Bravo	----	----	125	
	Cooper	----	----	105	
	Freedom	----	----	90	
	Hopewell	----	----	105	
	Jackson	----	----	215	
	SS 550 (BRAND)	----	----	----	271
	SW27 (BRAND)	----	----	----	380
	SW50 (BRAND)	----	----	----	80
	SW8302 (BRAND)	----	----	----	135
	SW8309 (BRAND)	----	----	----	150
Rye, Winter	Aroostook	----	21	91	
TOTALS		22	164	2242	1258

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.