

Some Items of Interest to Kentucky Nurserymen

For the Year Ended June 30, 1950

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**SOME ITEMS OF INTEREST TO KENTUCKY NURSERYMEN,
FOR THE YEAR ENDED JUNE 30, 1950**

By W. A. Price and Howard G. Tilson

The Kentucky Nursery Inspection Law, since its enactment in 1926, has been revised and is herein reproduced as it appears upon the statute books.

**KENTUCKY REVISED STATUTES-SECTIONS
249.010 to 249.990**

249.010 DEFINITIONS. As used in this chapter, unless the context requires otherwise:

(1) "Commissioner" means the Commissioner of Agriculture, Labor and Statistics.

(2) "Department" means the Department of Agriculture, Labor and Statistics.

(3) "Director" means the Director of the Agricultural Experiment Station.

249.020 (1925a-1; 1925a-10) STATE ENTOMOLOGIST; ASSISTANT. (1) The Entomologist and botanist of the Agricultural Experiment Station shall be the State Entomologist.

(2) The State Entomologist shall serve without pay other than his salary as an officer of the Agricultural Experiment Station. He shall be paid his traveling expenses.

(3) The State Entomologist shall appoint a deputy entomologist and assistants.

249.030 (1925a-1; 1925a-10) ENTOMOLOGIST MAY MAKE RULES AND PUBLISH DATA. (1) The State Entomologist, with the advice and consent of the director and the commissioner, may prescribe, modify and enforce rules, regulations and orders needed to carry out KRS 249.020 to 249.100.

(2) The State Entomologist may publish bulletins, circulars and reports containing information concerning inspections, insects and plant diseases.

(3) The rules and regulations and publications shall be printed from time to time and furnished to interested persons.

249.040 (1925a-1) ESTABLISHMENT OF QUARANTINES. The State Entomologist shall, with the advice and consent of the director

and the commissioner, establish and maintain quarantines against the importation into this state, of any trees, plants and parts of plants, whether nursery-grown or not, from any state or from any county within the state, where such plants or parts of plants are known to be affected with dangerous insect pests or plant diseases. He shall designate in announcements of quarantine the area quarantined, whether it constitutes a part of this state or some other state.

249.050 (1925a-2) INSPECTION OF ARTICLES AND PREMISES: DISEASED PLANTS TO BE DESTROYED. Whenever the State Entomologist or his deputy has reason to believe or is credibly informed that at any place within the state there has been introduced, or offered for sale, trees, plants or parts of plants infected or infested with diseases or destructive pests that are likely to spread, he shall investigate the suspected articles and premises. If they are found so infested or infected, he shall notify the owner or possessor, in writing, of the nature of the infestation, specifying the insects or diseases that have been found, and demand that within a reasonable specified time the affected articles or premises be disinfected, or destroyed by fire, under the direction of the State Entomologist, his deputy or assistant, and at the expense of the owner or possessor.

249.060 (1925a-8) NURSERIES, DEALERS AND AGENTS TO BE LICENSED. (1) Every resident nursery or agency selling nursery stock in this state shall annually file credentials with the State Entomologist. If these credentials are satisfactory to the State Entomologist, the director and the commissioner, the State Entomologist shall, upon payment of a fee of five dollars by the nursery or agency, issue it a license authorizing it to do business in the state.

(2) Every nonresident nursery and every agent, dealer or seller of trees, representing nonresident nurseries or dealers shall annually file credentials with the State Entomologist. These credentials shall include the names of nurseries, nurserymen or other persons represented. If these credentials are satisfactory to the State Entomologist, the director and the commissioner, the State Entomologist shall issue the license.*

(3) Any person soliciting orders for or delivering trees or plants in this state shall carry with him a copy of his license from this state, which he shall show to prospective buyers, purchasers, county officials or agents of the State Entomologist on demand.

* Only resident nurserymen and dealers are required to pay the five dollar license fee.

249.070 (1925a-3; 1925a-4) ENTOMOLOGIST TO INSPECT NURSERIES AND ORDER DESTRUCTION OF PESTS: SHIPMENT OF AFFECTED STOCK PROHIBITED. (1) All nurseries where trees, vines, plants or other nursery stock are grown and offered for sale, shall be inspected by the State Entomologist or by his assistant, once each year. He shall notify the owners of such nurseries, in writing, of the presence of any San Jose scale or other dangerous pests on the stock of these nurseries, and shall also notify, in writing, the owner of any affected nursery stock to take such measures, on or before a certain day, for the destruction of insect or fungus enemies of nursery stock as have been shown to be effectual.

(2) The owner of the affected nursery shall, within the time specified, take such steps for the destruction of injurious insects or fungus enemies present, as will exterminate them.

(3) No person shall ship or deliver any such nursery stock affected with insects or fungus enemies, before treatment.

249.080 (1925a-5) ENTOMOLOGIST TO ISSUE CERTIFICATE FOR STOCK FREE FROM INSECTS AND FUNGUS. When the State Entomologist examines any trees, vines, plants or other nursery stock and finds the stock free from dangerously injurious insects and fungus enemies, he shall make out and deliver to the owner of the stock a certificate stating that he has inspected the stock and that he believes it to be free from dangerously injurious insects and fungus enemies. He shall keep in his office, for the information of anyone interested, copies of all valid certificates issued by him.

249.090 (1925a-6) SHIPMENTS TO BE ACCOMPANIED BY INSPECTION CERTIFICATES. Whenever a resident nurseryman or seller of trees, vines, plants or other nursery stock ships or delivers such goods, he shall send on each package so shipped or delivered a printed copy of the certificate issued to him by the State Entomologist, stating that the stock has been inspected as required by law and is believed to be free from dangerously injurious insect or fungus enemies.

249.100 (1925a-7) NONRESIDENTS TO FILE, AND IMPORTED PLANTS TO BEAR, INSPECTION CERTIFICATES. Every nonresident nurseryman or other person intending to ship into this state trees, plants or parts of plants, whether nursery-grown or not, shall file with the State Entomologist a copy of a valid certificate

from a state or United States Government inspector showing that the trees, plants or their parts have been inspected and that he is authorized to sell and ship or transport them. All packages of trees, plants or parts of plants shall bear a copy of a certificate of inspection from an official inspector. Transportation companies within the state shall notify the State Entomologist at once when any such trees or plants are received by them without a valid certificate. Nursery stock or other trees, plants or parts of plants shipped into this state in violation of a state or United States quarantine may be seized and destroyed or returned to the shipper at the expense of the owner or possessor.

249.200 (42g-1; 42g-2) JAPANESE BEETLE CONTROL. The State Entomologist shall adopt and carry out such measures as he deems advisable to protect crops from the ravages of the Japanese beetle (*Popillia japonica*). He may employ help, purchase materials and enforce such regulations as in his descretion are necessary to accomplish the purpose.

249.990 (42f-4; 200; 1923; 1925a-4; 1925a-9) PENALTIES. (1) Any person who violates any of the provisions of KRS 249.020 to 249.100 or hinders the carrying out of any of the provisions of those sections shall be fined not less than twenty-five dollars nor more than five hundred dollars.

(2) Any fine imposed for a violation of subsection (3) of KRS 249.070 may be recovered in the county in which the nursery is situated or the county to which the nursery stock is shipped.

SUMMARY OF REQUIREMENTS OF KENTUCKY NURSERY INSPECTION LAW

(1) It shall be unlawful to sell or offer for sale uninspected or uncertified nursery stock. A certificate of inspection indicates freedom from certain injurious insects and plant diseases but does not vouch for trueness to variety nor for grade and condition of any nursery stock.

(2) Growers of nursery stock, for sale or shipment, shall apply in writing before June 1st of each year to the State Entomologist, Kentucky Agricultural Experiment Station, Lexington, for inspection services.

(3) Every dealer in nursery stock shall secure a nursery dealer's permit. Before this is issued, however, he must furnish an affidavit that he will buy and sell only stock that is certified and will maintain

with the State Entomologist a correct and complete list of all sources from which he gets his stock. Landscape architects and tree movers who handle nursery stock are classified as dealers.

(4) Every person who solicits orders for nursery stock shall obtain and carry an agent's permit which is secured only upon request of the nurseryman or dealer to be represented.

(5) All packages or bundles of nursery stock shipped by common carrier must have attached a copy of the inspection certificate or permit.

(6) Certificates and permits may be revoked for cause.

(7) Fees shall be paid as follows: Inspection certificate \$5; dealer's permit, \$5. Agents' permits and nonresident nurserymen's certificates are furnished without cost. Fees shall accompany application. Application blanks may be obtained from the State Entomologist.

(8) Nonresident nurserymen shall file copies of their state certificates and secure nonresident permits. Every package of nursery stock coming into Kentucky shall have a valid inspection certificate attached to the package. Nonresident nurserymen, dealers, and agents shall carry their Kentucky permits when soliciting orders or delivering nursery stock in Kentucky.

(9) All certificates and permits automatically expire June 30 following date of issuance.

"NURSERY STOCK" DEFINED

Nursery stock includes all trees, shrubs, vines; roses, strawberry, raspberry, and blackberry plants; herbaceous perennial plants and roots; ornamental bulbs, corms, tubers, and rhizomes; and any part of the above groups of plants capable of disseminating injurious insects and plant diseases. For regulatory purposes the term "Nursery Stock" includes all plants which grow out of doors and live more than one year, whether nursery grown or native.

REQUIREMENTS FOR SHIPMENT OF NURSERY STOCK INTO OTHER STATES

A summary of the major requirements for shipping nursery stock into other states is given on the following page. It will be noted that most states require the out-of-state shipper to file a copy of his nursery inspection certificate with the proper administrative authority

before shipments are made. Only three states require filing fees, except under special conditions, that are noted in a table which follows.

Special shipping tags are required by the following states and will be furnished by them at a nominal cost to the shippers: Arkansas (\$2 per 100 tags); Florida (\$3.24 per 100 tags); Georgia (\$1.00 per 100 tags); and New Mexico (\$1.25 per 100 tags).

A special tag should be secured and attached to each bundle of nursery stock shipped to any of the four states listed.

State	State of origin certificate filed	Nurseryman's filing fee	Agent's fee	Special tag	Posted Bond
Alabama	Yes	Reciprocal			
Arizona	No	None	\$1	No	None
Arkansas	Yes	Reciprocal	None	No	None
California	No	None	\$1	Yes	Reciprocal
Canada	Yes	None	None	No	None
Colorado	Yes	None	None	Yes ¹	None
Connecticut	No	None	None	No	None
Delaware	Yes	None	None	No	None
Florida	Yes	None	None	No	None
Georgia	Yes	Reciprocal	None	Yes	None
Idaho	Yes	\$5 to \$15	\$1	Yes	\$1000 ²
Illinois	Yes	None	\$1	No	\$1000 ²
Indiana	Yes	None	None	No	None
Iowa	Yes	Reciprocal	\$1	No	None
Kansas	Yes	Reciprocal	None	No	None
Kentucky	Yes	None	None	No	None
Louisiana	No	None	None	No	None
Maine	Yes	None	None	No	None
Maryland	Yes	Reciprocal	None	No	None
Massachusetts	Yes	None	None	No	None
Michigan	Yes	\$15 or Reciprocal ³	None	No	None
Minnesota	Yes	Reciprocal	\$1	No	None
Mississippi	Yes	Reciprocal	Reciprocal	No	None
Missouri	Yes	None	None	No	None
Montana	Yes	\$5 to \$25	None	No	None
Nebraska	Yes	Reciprocal	\$25	No	None
Nevada	No	None	\$1	No	None
New Hampshire	No	None	None	No	None
New Jersey	Yes	Reciprocal	None	No	None
New Mexico	Yes	\$10	None	No	None
New York	No	None	\$25	Yes	None
North Carolina	Yes	Reciprocal	None	No	None
North Dakota	Yes	Reciprocal	None	No	\$1000 ⁴
Ohio	Yes	Reciprocal	None	No	None
Oklahoma	Yes	Reciprocal	\$1	No	None
Oregon	No	None	\$1	No	None
Pennsylvania	Yes	None	None	No	None
Rhode Island	Yes	None	None	No	None
South Carolina	Yes	None	None	No	None
South Dakota	Yes	Reciprocal	None	No	None
Tennessee	Yes	Reciprocal	\$1	No	None
Texas	Yes	Reciprocal	Reciprocal	No	\$5000 ⁴
Utah	Yes	Reciprocal	None	No	None
Vermont	Yes	\$10 ³	None	No	None
Virginia	No	None	None	No	None
Washington	No	Reciprocal	Reciprocal	No	None
West Virginia	No	Reciprocal	\$1	No	None
Wisconsin	Yes	None	\$1	No	None
Wyoming	Yes	Reciprocal	None	No	None

¹ Secure special permit and instruction from officer in charge before making shipment.

² Only for fruit-stock shippers.

³ For nurserymen who operate through agents.

⁴ For nurserymen who promise maintenance.

**PLANT QUARANTINE OFFICIALS OF THE STATES,
TERRITORIES, DISTRICT OF COLUMBIA,
CANADA, AND MEXICO**

- Alabama — B. P. Livingston, Chief, Division of Plant Industry, State Department of Agriculture and Industries, 515 Dexter Avenue, Montgomery 1
- Alaska — Hon. G. W. Gasser, Commissioner of Agriculture, Fairbanks
- Arizona — J. L. E. Lauderdale, State Entomologist, P. O. Box 2006, Phoenix
- Arkansas — Paul H. Millar, Chief Inspector, State Plant Board, Little Rock
- California — A. P. Messenger, Chief, Bureau of Plant Quarantine, State Department of Agriculture, Sacramento 14
- Canada — W. N. Keenan, Chief, Plant Protection Division, Department of Agriculture, Ottawa, Ontario
- Colorado — F. Herbert Gates, State Entomologist, Bureau of Plant and Insect Control, 20 State Museum, Denver 2
- Connecticut — Dr. Roger B. Friend, State Entomologist, Agricultural Experiment Station, Box 1106, New Haven 4
- Delaware — John L. Webb, Nursery Inspector, State Board of Agriculture, Dover
- District of Columbia — F. P. Hubert, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, Washington 25
- Florida — Arthur C. Brown, Plant Commissioner, State Plant Board, Gainesville
- Georgia — C. H. Alden, Director of Entomology, State Capitol, Atlanta 3
- Hawaii — D. T. Fullaway, Chief Plant Inspector, Board of Commissioners of Agriculture and Forestry, Honolulu
- Idaho — Wilson Kellogg, Director, Bureau of Plant Industry, State Department of Agriculture, Boise
- Illinois — H. F. Seifert, Horticultural Inspection Supervisor, Room 300, Professional Arts Building, Glen Ellyn
- Indiana — Frank N. Wallace, State Entomologist, State Department of Conservation, Indianapolis
- Iowa — Dr. H. M. Harris, State Entomologist, Ames
- Kansas, North — Dr. Roger C. Smith, State Entomologist, State College of Agriculture and Applied Science, Manhattan
- South — Dr. Charles D. Michener, Entomologist, Entomological Commission of Kansas, Lawrence
- Kentucky — Professor Walter A. Price, State Entomologist, College of Agriculture, University of Kentucky, Lexington
- Louisiana — Edwin Lott, State Entomologist, State Department of Agriculture and Immigration, Box 4153, Capitol Station, Baton Rouge
- Maine — E. D. Johnson, Horticulturist, Division of Plant Industry, State Department of Agriculture, Augusta
- Maryland — Dr. E. N. Cory, State Entomologist, University of Maryland, College Park
- Massachusetts — Robert P. Trask, Director, Division of Plant Pest Control and Fairs, 43 Tremont St., Boston 8
- Mexico — Ing. Dario Arrieta, Director General of Agriculture, San Jacinto, D. G. Mexico
- Michigan — C. A. Boyer, Chief, Bureau of Plant Industry, State Department of Agriculture, Lansing 13
- Minnesota — T. L. Aamodt, Director, Bureau of Plant Industry, State Department of Agriculture, Dairy and Food, University Farm, St. Paul 8
- Mississippi — Dr. Clay Lyle, Entomologist, State Plant Board, State College
- Missouri — R. E. Roselle, State Entomologist, State Department of Agriculture, Jefferson City
- Montana — George L. Knight, Chief, Division of Horticulture, State Department of Agriculture, Labor, and Industry, Missoula
- Nebraska — C. J. Walstrom, Entomologist, Bureau of Plant Industry, State Department of Agriculture and Inspection, Lincoln

- Nevada – George G. Schweis, Director, Division of Plant Industry, State Department of Agriculture, P. O. Box 1027, Reno
- New Hampshire – Dr. J. G. Conklin, State Entomologist, Insect and Plant Disease Suppression and Control, State Department of Agriculture, Durham
- New Jersey – Harry B. Weiss, Chief, Bureau of Plant Industry, State Department of Agriculture, Trenton 8
- New Mexico – Professor R. F. Crawford, Deputy Inspector, College of Agriculture and Mechanic Arts, State College
- New York – Dr. A. B. Buchholz, Director, Bureau of Plant Industry, State Department of Agriculture and Markets, Albany 1
- North Carolina – C. H. Brannon, State Entomologist, State Department of Agriculture, Raleigh
- North Dakota – Dr. J. A. Munro, Chairman, Department of Entomology, North Dakota Agricultural College, Fargo
- Ohio – John Baringer, Chief, Division of Plant Industry, State Department of Agriculture, Columbus 15
- Oklahoma – Clyde A. Bower, Director, Division of Entomology and Plant Industry, State Department of Agriculture, Oklahoma City 5
- Oregon – Frank McKennon, Chief, Division of Plant Industry, State Department of Agriculture, Agricultural Building, Salem
- Pennsylvania – Dr. T. L. Guyton, Director, Bureau of Plant Industry, State Department of Agriculture, Harrisburg
- Puerto Rico – Luis A. Catoni, Chief Inspector, Department of Agriculture and Commerce, San Juan
- Rhode Island – Dr. H. Knutson, Administrator, Division of Entomology and Plant Industry, State Department of Agriculture and Conservation, State House, Providence 2
- South Carolina – J. A. Berly, Entomologist, State Crop Pest Commission, Clemson
- South Dakota –
- Tennessee – J. C. Moser, State Entomologist and Plant Pathologist, University of Tennessee, Knoxville
- Texas – Walter T. McKay, Chief, Division of Plant Quarantine, State Department of Agriculture, Austin
- Utah – Don R. Merkley, State Entomologist, State Department of Agriculture, Salt Lake City
- Vermont – Dr. M. B. Cummings, State Nursery Inspector, Agricultural Experiment Station, Burlington
- Virginia – G. T. French, State Entomologist, State Department of Agriculture and Immigration, 1112 State Office Building, Richmond 19
- Washington – William H. Shaw, Supervisor of Horticulture, State Department of Agriculture, Olympia
- West Virginia – F. Waldo Craig, Entomologist, State Department of Agriculture, Charleston 5
- Wisconsin – E. L. Chambers, State Entomologist, State Department of Agriculture, State Capitol, Madison 2
- Wyoming – George B. Harston, State Entomologist, State Department of Agriculture, Powell

INTERSTATE SHIPMENT OF BARBERRY AND MAHONIA RESTRICTED

Federal Quarantine Number 38, on account of Black Stem Rust was amended by the Secretary of Agriculture to become effective February 11, 1950. Among the important changes in regulations are: (1) the elimination of the requirement to place a special permit tag on each package of barberry, mahonia or mahoberberis shipped inter-

state; (2) shipments of seeds and fruits of approved species and varieties are required to have special permit tags attached when going into any of the eradication states.

The requirements of Federal Quarantine Number 38 are summarized as follows: (1) The eradication states are: Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Pennsylvania, South Dakota, Virginia, Washington, West Virginia, Wisconsin, and Wyoming; (2) Barberry, mahonia, and mahoberberis, in any variety, can be shipped interstate (to any state) only under certificate issued by the Bureau of Entomology and Plant Quarantine; (3) Application for Federal certificate must be filed in duplicate, not later than May 15 each year, with the Bureau of Entomology and Plant Quarantine Division of Plant Disease Control, Washington 25, D. C.; (4) Only species and varieties known to be rust resistant and approved by the Bureau will be acceptable for certification. Species and varieties not known to be resistant to rust cannot be shipped interstate and growers who have such rust susceptible species will be required to destroy them before permits to ship approved varieties are granted; (5) The following species and varieties of barberry, mahonia, and mahoberberis are designated as rust resistant:

Scientific Name	Common Name
<i>Berberis arido-calida</i>	
B. <i>beaniana</i>	Bean's Barberry
B. <i>buxifolia</i>	Magellan Barberry
B. <i>buxifolia nana</i>	Dwarf Magellan Barberry
B. <i>calliantha</i>	-----
B. <i>candidula</i>	Paleleaf Barberry
B. <i>chenaulti</i>	Chenault Barberry
B. <i>circumserrata</i>	Cutleaf Barberry
B. <i>concinna</i>	Dainty Barberry
B. <i>darwini</i>	Darwin Barberry
B. <i>formosana</i>	-----
B. <i>franchetiana</i>	-----
B. <i>gagnepaini</i>	Black Barberry
B. <i>gilgiana</i>	Wildfire Barberry
B. <i>horvathi</i>	-----
B. <i>hybrido-gagnepaini</i>	False Black Barberry
B. <i>julianae</i>	Wintergreen Barberry
B. <i>koreana</i>	Korean Barberry
B. <i>linearifolia</i> var. Orange King	Jasperbells Barberry
B. <i>mentorensis</i>	Mentor Barberry
B. <i>Pallens</i>	Pallid Barberry
B. <i>potanini</i>	Longspine Barberry
B. <i>replicata</i>	Curlleaf Barberry
B. <i>sanguinea</i>	Red-pedicel Barberry

B. <i>sargentiana</i>	Sargent Barberry
B. <i>stenophylla</i>	Rosemary Barberry
B. <i>stenophylla diversifolia</i>	-----
B. <i>stenophylla irwini</i>	Irwin Barberry
B. <i>stenophylla nana compacta</i>	Corallina Barberry
B. <i>telomaica artisepala</i>	-----
B. <i>thunbergi</i> DC.	Japanese Barberry
B. <i>thunbergi atropurpurea</i>	Redleaf Japanese Barberry
B. <i>thunbergi atropurpurea nana</i>	-----
B. <i>thunbergi erecta</i>	Truehedge Columnberry
B. <i>thunbergi "globe"</i>	-----
B. <i>thunbergi "golden"</i>	-----
B. <i>thunbergi maximowiczi</i>	Coral Japanese Barberry
B. <i>thunbergi minor</i>	Box Barberry
B. <i>thunbergi pluriflora</i>	Flame Barberry
B. <i>thunbergi "thornless"</i>	-----
B. <i>thunbergi "variegata"</i>	-----
B. <i>triacanthorhophora</i>	Threespine Barberry
B. <i>verruculosa</i>	Warty Barberry
B. <i>virgatorum</i>	-----
<i>Mahonia aquifolium</i>	Oregongrape Mahonia
M. <i>bealei</i>	Leatherleaf Mahonia
M. <i>compacta</i>	-----
M. <i>dictyota</i>	Netvein Mahonia
M. <i>fortunei</i>	Chinese Mahonia
M. <i>nervosa</i>	Cascades Mahonia
M. <i>pinnata</i>	Cluster Mahonia
M. <i>repens</i>	Creeping Mahonia

PLANT IMPORTATION

Under provisions of Federal Quarantine Number 37 certain limitations are placed upon the importation of plants and seeds from foreign countries. Anyone wishing to import nursery stock, plants or seeds must first obtain a permit from the Bureau of Entomology and Plant Quarantine, 209 River Street, Hoboken, New Jersey. In applying for a permit to import plant material the following information is required: (a) The name and location of the producer from whom the plants or seeds are to be secured; (b) the name and address of the person or firm to which the plants or seeds are to be shipped; (c) the number and genus of the plants or seeds for which the permit is desired.

All restricted plants imported under the conditions listed above are limited in size and age to the youngest and smallest which can be successfully freed from soil about their roots, transported to the United States, and established in this country with a reasonable degree of success. Certain classes of plants permitted entry under quarantine 37 are required to be grown by the importer under post entry inspection regulations. Such plants are not released to the

trade until such time as their freedom from plant diseases and insect pests has been established. The plants are therefore grown for one or more years in a place where the state inspector may have access to them for inspection purposes, for such time as appears necessary. When their freedom from pests and diseases has been established, the plants under quarantine are released.

JAPANESE BEETLES

Seven Japanese beetles were found in a small area in Jefferson county during June and July 1949. These finds were made possible by the use of 100 traps lent by the Bureau of Entomology and operated by the Kentucky nursery inspection service. The infested area included two nurseries.

Immediately following the capture of the first beetles plans were started to treat the area to prevent spread of the beetles. All foliage in the two nurseries and their environs was sprayed with DDT in an effort to kill adult Japanese beetles before egg laying was completed. The same area was given soil treatment with DDT, later in the season, in an effort to kill any larvae of Japanese beetles which may have developed.

The two nurseries were immediately placed under restrictions. All plants moved out with soil about the roots were treated by dipping the balls in a solution known to kill Japanese beetle larvae in the soil. This was done under supervision of State or Federal employees and at the expense of the nurserymen.

Excellent cooperation was given by the nurserymen involved and the home owners in the vicinity. The Jefferson County Fiscal Court financed the soil treating of the area outside the nurseries and the Bureau of Entomology and Plant Quarantine furnished equipment and supervision for making the soil application of DDT. Mr. Shirley Anderson, County Agricultural Agent of Jefferson County, worked very faithfully with this problem. His help was greatly appreciated.

Plans are being made for an extensive Japanese beetle trapping program during the 1950 flight season. The Bureau of Entomology and Plant Quarantine is planning to trap the major plant growing establishments as well as airports, freight yards, truck depots, and several sections of the Louisville area. Approximately 2,500 Japanese beetle traps will be used in this program to determine if or to what extent the Japanese beetle has become established in Kentucky.

WHITE-FRINGED BEETLES

Tennessee now has two localities infested with White-fringed beetle. During July 1949 an infestation was discovered on the grounds of the Shell Oil Company, 3 miles northeast of Chattanooga. The grounds of the Shell Oil Company were landscaped several years ago with nursery stock from a nursery in Georgia which was later found to be infested with White-fringed beetle. The infestation discovered in Memphis, Tennessee, in 1948 has now been found to cover several acres and includes the property of a wholesale florist.

The known infestations of White-fringed beetle have increased in all the infested states. Georgia added three counties in 1949 to her infested area, making a total of 59 infested counties; North Carolina added 2 counties for a total of 18 and in South Carolina one county was added, making a total of 3. The infestations in the four states in which the original infestations were found have continued to expand. These four states are Alabama, Florida, Louisiana, and Mississippi.

Inspectors from the Bureau of Entomology and Plant Quarantine made numerous inspections in Kentucky during the summer months of 1949 but found no White-fringed beetles.

Diligent effort to prevent spread into Kentucky is our best weapon to use against White-fringed beetle.

LOCAL PESTS

On account of the many questions arising, concerning insects and diseases, and eventually finding their way to the office of the State Entomologist, it is considered advisable to include, in this publication, a short discussion concerning some of the more important of these pests.

Red Spider

Red spider, particularly the two spotted species, is probably the most troublesome pest in Kentucky nurseries at this time. In some seasons it is difficult to keep it under control. For those who wish to employ a dust, sulphur ground finely enough to pass through a 300 mesh sieve, will probably be most advisable. The addition of enough pyrethrum to the sulphur to make a 1% dust will make the dust more effective. Since there is no known dust combination of pyrethrum-sulphur on the market at present, it will be necessary to have the mixture made according to specifications.

Of the more recently introduced insecticides a 1% parathion dust is quite effective against the two spotted spider mite. Parathion, 25% wettable powder, one pound per 100 gallons of water, has given excellent control of red spider on a wide range of host plants. There is little danger of plant injury with this formulation when the usual precautions are followed.

Because parathion is extremely poisonous every precaution should be taken to avoid contact of the material with the body. Also observe all precautions suggested by the manufacturer.

Bag Worm

Bag worm is one of the most common of the chewing insects found on evergreens. These leaf eating caterpillars live in silken bags covered with bits of leaves which are enlarged as the worms grow. The eggs are deposited by the females in the bags which hang on the plant over winter. The eggs hatch in this area usually in late May and the young worms crawl out, feed, and construct individual bags. There is a single generation per year.

Lead arsenate used at the rate of 2 to 3 pounds per 50 gallons of water plus 2 ounces of soybean flour will give excellent control if applied while the worms are still small. As the worms increase in size they become increasingly difficult to poison, consequently the formula should be increased to 4 pounds of lead arsenate to 50 gallons of water.

All large bags, especially over-wintering bags, should be pulled off plants and burned in order to destroy the over-wintering eggs. Hand picking of larvae on low-growing trees and shrubs is often advisable.

Pine Needle Scale

Pine needle scale is a conspicuous white scale which attacks several species of pine and spruce and may attack hemlock and fir. The most effective control is the application of liquid lime sulphur in early spring, before new growth begins. The material should be mixed at the rate of 1 gallon liquid lime sulphur to 6 to 8 gallons of water. The foliage of the infested plant should be thoroughly covered.

Euonymus Scale

Euonymus scale is very destructive and infests most of the commonly grown varieties of euonymus. The females are dark and shaped

somewhat like an oyster shell, while the males are white, slender and quite conspicuous.

The young are produced under the scale of the female and emerge about the time the plants are showing the first green tips of growth.

Apply a dormant strength oil spray just before growth starts in the spring. Before spraying remove and burn all heavily infested parts that can be spared. When the young are hatching make several applications of nicotine sulphate and soap solution.

Root Knot Nematode

Root knot nematodes are microscopic eel-worms which embed themselves in the roots and tubers of many plants. These parasites suck the sap from root tissue and cause knots ranging in size from that of a pin head to a large pea or larger. These knots interfere with normal growth and production of the plants attacked. There is no effective treatment for infested plants.

In the nursery the plants most commonly infested are althea, buddleia, boxwood, weigela, rose, deutzia, barberry, clematis, forsythia, privet, arbelia, euonymus, and willow. Among the perennials, peony heads the list of susceptible plants. No plants infested with root-knot nematodes should be allowed to reach trade channels.

Infested soil can be fumigated successfully to kill approximately 95 percent of the nematodes present. All plants must be removed from areas being fumigated. The soil fumigation process is expensive and laborious but rids the soil of nematodes so that crops can be economically produced for a period of 3 to 5 years before the infestation builds up again. There is no known method of killing nematodes in the soil while plants are growing in the same area. Soils outside the greenhouse can be sterilized by the use of certain newer fumigants such as methyl bromide in a liquid carrier, DD mixtures, and chloropicrin. These materials are sold under various trade names. Their use should follow manufacturer's directions and safety precautions should be taken wherever necessary. Heat sterilization of greenhouse soils will very effectively control nematodes.

Grasshoppers

Grasshoppers can become serious pests in nurseries and flower gardens as well as on farms in general. Eggs are deposited in the soil during late summer or early fall and hatch the following year

in early summer. Grasshoppers are most easily poisoned while young or in the nymphal stage.

Chlordane or toxaphene have given excellent control of grasshoppers when applied at the rate of 1½ to 2 pounds of actual chemical per acre. The material can be applied either as a dust or spray and applied directly to the vegetation of the infested area. On account of the residue problem treated crops should not be harvested or fed to livestock sooner than 30 days after the application has been made.

INSPECTION REQUIREMENTS FOR CERTAIN CLASSES OF NURSERY MATERIAL

Gladiolus Corms

Two inspections are required for certification of gladiolus corms. The first inspection is made during the blooming season and the second inspection during storage after the corms have been cleaned.

Sweetpotato Plants

Some state laws establish the requirements that sweetpotato plants should be free from black rot, stem rot, and sweetpotato weevil before they are shipped into the respective states. Only sweetpotatoes which are certified as free from sweetpotato weevil should be bedded. A request for inspection service should be sent to the State Entomologist in advance of bedding time, giving approximate date of bedding and drawing of first plants.

Native or Collected Plants

There seems to be a growing demand for certain native or collected plants. Where it is desired to offer for sale this type of plant material the plants should be collected and "lined out" or "heeled in" and held for inspection. Notice should be forwarded to the State Entomologist giving the date when the plants will be ready for inspection and the location of the plant yard.

For general inspection requirements see "Summary of Requirements of Kentucky Nursery Inspection Law" and "Nursery Stock" defined on previous pages.

Voluntary Certification

Plant certification requirements are not uniform throughout the forty-eight states. Some states require the inspection of greenhouse

plants, bulbs, corms, rhizomes, and tubers, annual flowering plants and garden vegetable plants. Kentucky does not require inspection on any of these plants or materials. Dealers can merchandise this material, under the provisions of the Kentucky Nursery law, without registering or obtaining a state permit. A grower, of any of the above mentioned plants, who wishes to ship to other states or who wishes to have inspection and certification for any other reason can have inspection in the usual manner, by applying to the State Entomologist. As in the case of required inspection, a fee of \$5.00 is charged for voluntary inspection.

Strawberry Plants

Growers wishing to offer strawberry plants for sale should take into account the dual inspection requirements. Notice should be given to the State Entomologist by the middle of April if inspection services are desired. The first inspection of strawberry plants is made during the blooming season and the second inspection during late summer or early fall.

Raspberry Plants

Two inspections are required for certification of raspberry plants. These inspections are made during summer months and must be at least thirty days apart. Raspberry plant growers wishing inspection services should notify the State Entomologist by June first.

KENTUCKY NURSERYMEN WHO RECEIVED CERTIFICATES OF INSPECTION, 1949-50

Name, Address, Acreage	Kind of Stock
Adcock, Mrs. W. A.—Hopkinsville— $\frac{1}{4}$ acre	Perennials, bulbs
Alford, James W.—Waynesburg—1 acre	General
Arrow-Wood Nursery W. C. O'Conner—Warsaw—3 acres	General
Arterburn, Paul Nursery Mrs. Paul Arterburn—St. Matthews—5 acres	General
Barnett's Nursery A. E. Barnett—Murray— $\frac{1}{2}$ acre	General
Barr and Leichhardt Nursery—Bowling Green—5 acres	General
Bellfonte Nursery Orval Lycan—Ashland—10 acres	General
Big Sandy Nursery W. S. Burris—Ashland— $\frac{1}{4}$ acre	Ornamental
Cherry Florist—Paducah	Greenhouse
Chick's Nursery C. D. Chick—Marion—2 acres	General
Clyffy Evergreen Gardens—Catlettsburg—2 acres	General
Crawford, I. T.—Murray—1 acre	Gladioli

Name, Address, Acreage	Kind of Stock
Crume Nursery and Landscape Co., T. C. Crume - Florence - 12 acres	General
Curry, J. G. - Hawesville	Sweetpotato plants
Dixie View Nurseries	
A. L. Heger - Covington, Box 423 - 10 acres	General
Donaldson Nursery	
J. F. Donaldson - Sparta - 10 acres	General
Dressman, J. A. - Covington, R. 3	Tulips
Durrett, Lydean - Louisville, 4341 Preston Highway - 1 acre	General
Elizabethtown Florist and Nursery	
William Shouse - Elizabethtown - 1 acre	General
England's Nursery	
A. G. England - Louisville, 4054 Preston Highway - 2 acres	General
Evans Brothers - Christine - 1/4 acre	Fruits
Evans Gardens - Lexington, 916 N. Broadway - 3 acres	Perennial
Fike Nurseries	
J. W. Fike - Hopkinsville - 60 acres	General
Florence Nursery - Florence - 2 acres	General
Gardiner, Boone Nurseries	
Dan Gardiner - Louisville, R. No. 6 - 15 acres	General
Gordon, Fred L. Nursery - Louisville, 5402 Newcut Road - 7 acres	General
Gramse Nursery - Paducah, Cario Road - 5 acres	General
Grant Gardens - Louisville, 412 Oread Road - 1/4 acre	Perennials
Green River Home Nursery	
W. A. Sandefur - Robards - 5 acres	General
Haag Nurseries - Jeffersontown - 20 acres	General
Higdon Nursery - Mayfield - 2 acres	General
Hillenmeyer Nursery - Lexington - 250 acres	General
Hill's Nursery	
Wm. Hill - Warsaw - 25 acres	General
Hinkle, Buckner - Paris - 1 acre	General
Humphrey's Landscape Service	
A. G. Humphrey - Mt. Sterling - 10 acres	General
James, R. L. - Lexington, Walnut Lawn Farm - 1 acre	General
Johnstone, Allie - Calvert City - 5 acres	General
Kelley, Asa - Fordsville - 1/2 acre	Fruits
Keltner, Hobart - Pickette - 1/2 acre	Fruits
Kentucky Conservation Department - Frankfort - 3 acres	Tree Seedlings
Kentucky Department of Forestry - Frankfort (State Fair Grounds) - 3 acres	Tree Seedlings
Kentucky Department of Forestry - Dawson Springs - 22 acres	Tree Seedlings
Kistler, Mrs. Belle - Anchorage - 2 acres	Iris
Klein Nursery and Floral Co. - Crestwood - 50 acres	General
Korfhage Nursery and Florist	
Louis Korfhage - Shively - 10 acres	General
Leeming Nursery	
Bruce Leeming - Louisville, 4411 Dixie Highway - 5 acres	General
Lillard Nursery - Jeffersontown - 6 acres	General
Lindburg's Nursery - Lexington, Rose Mill Road - 5 acres	General
Martin's Nursery - Carrollton - 15 acres	General
McCutchen's Greenhouses - Paducah, Cario Road	Greenhouse
Metcalf Wholesale Florist - Hopkinsville	Greenhouse
Mink's Nursery	
Wm. Mink - London - 5 acres	General
Mt. Pleasant Gardens - Ft. Thomas, 1810 Ft. Thomas Avenue - 5 acres	General
Murray Nursery and Florist - Murray - 2 acres	Ornamental
Nick's Nursery - Anchorage - 35 acres	Ornamental
Nolin Gardens - Big Clifty - 3 acres	Gladioli

Name, Address, Acreage	Kind of Stock
Pack, H. V.—Carter — ½ acre	General
Painter-Shevetto Nursery — Anchorage — 5 acres	General
Perennial Farms — Louisville, Westport Road — 4 acres	Perennial
Piper's Nursery — Clinton — ¼ acre	Fruits
Pomona Nurseries — Bowling Green — 5 acres	General
Ray, Carl Company — St. Matthews — 10 acres	General
Razor, V. C.—Flemingsburg — ½ acre	Fruits
Reynolds Nursery	
Arthur Reynolds — Bondville — 12 acres	General
Sanders Brothers Nursery — Paducah — 10 acres	General
Shupe Nursery — Sedalia — 5 acres	General
Singer Gardens	
J. S. Singer — Georgetown — 3 acres	General
Smits Greenhouses — Paris — 5 acres	General
Soil Conservation Service — Paducah — 5 acres	Tree Seedlings
Spring Hill Nursery — Ashland — 3 acres	General
Taylor, Truman — Waynesburg — 3 acres	Strawberries
Threlkeld, J. H.—Clay — 4 acres	General
Wallitsch Nurseries — Louisville, Hikes Lane, R. No. 6 — 2 acres	General
Watkins, Leroy Nursery — Owensboro, Livermore Road — 4 acres	General
Webb, S. T.—Eubank — 1 acre	Strawberries
Weber, Boyd M.—Walton, R. No. 2 — ½ acre	General
Wettstain, H. C.—Lewisport	Sweetpotato plants
Whittinghill, Lonnie — Love — 2 acres	General
Wildwood Nursery	
Ralph Childers — Ashland, 2506 29th Street — 1 acre	General
Willadean Nurseries	
A. L. Kidwell — Sparta — 60 acres	General
Yopp Nursery — Paducah — 1 acre	General

NURSERY DEALERS

Agricultural Service, Inc.	Lexington
Alexandria Landscape Company	Campbellsville
Bailey, Earl	Salvisa
Bezold, Anthony	Newport
Bickers, Arnold	Lexington
Boswell, A. J.	Henderson
Brackin, B. C.	Owensboro
Breen, Wm. E.	Louisville
Bunton Seed Company	Louisville
Cherokee Tree Expert Company	Buechel
Chowning, Kelly I.	Lexington
Clark, Joe A.	Webster
Crutcher, Gabriel F.	Louisville
David, Elmer O.	Cynthiana
Davis, Paul M.	Rose Hill, Va.
Dennis, J. B.	Lexington
Eicher, Phillip W.	Shively
Evergreen Gardens	Frankfort
Ferguson, Lewis E.	Louisa
Fields, R. G.	Lexington
Foster, W. P.	Chicago, Ill.
Furnish, Ray	Ft. Thomas
Green, H. L. Company, Inc.	Louisville
Hammond, Chas.	Cincinnati, Ohio
Haupt, Fred, Florist	Louisville

Hill, Geo. D.	Dreyfus
Hill, Geo. W. and Company	Covington
Karagiozian, N.	Lexington
Karcher, Theodore B.	Louisville
Knight and Bostwick	Newark, N. Y.
Kresge, S. S. Company No. 56	Louisville
Kresge, S. S. Company	Lexington
Kresge, S. S. Company	Paducah
Kresge, S. S. Company	Covington
Kresge, S. S. Company	Newport
Kresge, S. S. Company	Owensboro
Kresge, S. S. Company No. 457	Louisville
Kress, S. H. and Company	Ashland
Kress, S. H. and Company	Hopkinsville
Kress, S. H. and Company	Winchester
Lose Brothers	Louisville
Lucas, Frank and Sons	Covington
McCory Stores Corp.	Louisville
McCullough, J. Chas. Seed Co.	Cincinnati, Ohio
Michler, Chas.	Lexington
Miles, H. C.	Louisville
Murphy, G. C. Company	Ashland
Murphy, G. C. Company	Maysville
Murphy, G. C. Company	Pikeville
Murphy, G. C. Company	Paintsville
Neuner, Carl	Louisville
Newberry, J. J.	Bardstown
Newberry, J. J.	Corbin
Newberry, J. J.	Cynthiana
Newberry, J. J.	Danville
Newberry, J. J.	Elizabethtown
Newberry, J. J.	Frankfort
Newberry, J. J.	Glasgow
Newberry, J. J.	Harlan
Newberry, J. J.	Hazard
Newberry, J. J.	Henderson
Newberry, J. J.	Lawrenceburg
Newberry, J. J.	Lebanon
Newberry, J. J.	Louisville
Newberry, J. J.	Mayfield
Newberry, J. J.	Mt. Sterling
Newberry, J. J.	Owensboro
Newberry, J. J.	Paris
Newberry, J. J.	Pineville
Newberry, J. J.	Richmond
Newberry, J. J.	Somerset
Newberry, J. J.	Winchester
Nichols, Gale	Louisville
Ostrander, John O.	Louisville
Purcell's	Lexington
Reid, L. B.	Viola
Renfro, H. E.	Beaver Dam
Riesenberg, Anthony J.	Ft. Thomas
Rottgering, Wm.	Paducah
Scott Burr Store No. 104	Ashland
Scott Burr Store No. 131	Harlan
Scott Burr Store No. 125	Hazard
Scott Burr Store No. 71	Middlesboro
Sears, Roebuck and Company	Louisville

Setters, James R.	Junction City
Sims Floral Company	Danville
Snyder, Ben	Louisville
Somerset Floral Company	Somerset
Stoke, Louis, Jr.	Louisville
Tacke, Frank Y.	Lexington
Vail, Robert	Louisville
Walgreen Drug Store	Lexington
Walgreen Drug Store, 526 South 4th	Louisville
Walgreen Drug Store, 790 Eastern Parkway	Louisville
Walgreen Drug Store, 661 South 4th	Louisville
Walgreen Drug Store, 972 Baxter Avenue	Louisville
Walgreen Drug Store	Owensboro
Walgreen Drug Store	Paducah
Wetzel's Super Market No. 1	Owensboro
Wetzel's Super Market No. 2	Owensboro
Wilder, R. G.	Louisville
Williams, John	Jeffersonville
Wilson Cox Hardware	Lexington
Winchester Florists	Winchester
Winn and Lovett Grocery Company No. 402	Louisville
Winn and Lovett Grocery Company No. 405	Louisville
Winn and Lovett Grocery Company No. 409	Louisville
Winn and Lovett Grocery Company No. 415	Louisville
Winn and Lovett Grocery Company	Louisville
Woolworth, F. W. Company No. 1121	Ashland
Woolworth, F. W. Company No. 505	Bowling Green
Woolworth, F. W. Company No. 411	Covington
Woolworth, F. W. Company No. 877	Danville
Woolworth, F. W. Company No. 493	Frankfort
Woolworth, F. W. Company No. 416	Henderson
Woolworth, F. W. Company No. 933	Hopkinsville
Woolworth, F. W. Company No. 152	Lexington
Woolworth, F. W. Company No. 34	Louisville
Woolworth, F. W. Company No. 706	Louisville
Woolworth, F. W. Company No. 1988	Louisville
Woolworth, F. W. Company No. 1702	Louisville
Woolworth, F. W. Company No. 1825	Madisonville
Woolworth, F. W. Company No. 996	Mayfield
Woolworth, F. W. Company No. 1175	Maysville
Woolworth, F. W. Company No. 478	Newport
Woolworth, F. W. Company No. 257	Owensboro
Woolworth, F. W. Company No. 203	Paducah
Woolworth, F. W. Company No. 787	Richmond
Woolworth, F. W. Company No. 674	St. Matthews

NONRESIDENT NURSERIES

Adamson Nursery	Palmyra, Indiana
All State Nursery Company	Smithville, Tennessee
Allen, Jim, Nursery Company	Smithville, Tennessee
Allen's Nurseries and Seed House	Geneva, Ohio
Allen, R. L. and Son	Dothan, Alabama
Allen, Walter Nursery	Summerville, South Carolina
Andrews Nursery Company and Orchard Crest Farm	Faribault, Minnesota
Anthony Lake Nursery	Pineola, North Carolina
Arcadia Rose Company	Newark, New York

Ard, H. H.	Portland, Tennessee
Armstrong Nurseries	Ontario, California
Arp Nursery Company	Tyler, Texas
Arp Roses, Inc.	Tyler, Texas
Ashcraft Plant Company	Copemish, Michigan
Athens Nursery Company	Athens, Alabama
Azalea Gardens	Memphis, Tennessee
Azalea Point Nursery	Mobile, Alabama
Backer Brothers	Kingsport, Tennessee
Bagwell, G. W.	Chattanooga, Tennessee
Bailey, J. V.	Newport, Minnesota
Baker, Wm. Horace Nurseries	Baileyton, Alabama
Banther, Glenn A.	Harrison, Tennessee
Banther, James	Harrison, Tennessee
Barker Brothers Nursery	McMinnville, Tennessee
Bass Pecan Company	Lumberton, Mississippi
Baxter Nursery	Baxter, Tennessee
Beersheba Springs Nursery	Beersheba Springs, Tennessee
Belgian Azaleas, Inc	Fern Park, Florida
Benton and Smith Nut Tree Nursery	Wassaic, New York
Bernhardt, D. J.	Three Rivers, Michigan
Berry Plant Nursery	Smithville, Tennessee
Berryhill Nursery Company	Springfield, Ohio
Blackwell Nurseries, Inc.	Semmes, Alabama
Blaster's Nurseries, Inc.	Tallahassee, Florida
Bloomtown Nursery	Smithville, Tennessee
Bobbink and Atkins	East Rutherford, New Jersey
Bobbink and Atkins Nursery	Smithbourg, New Jersey
Bosley Nursery	Mentor, Ohio
Bouldin Wholesale Nursery	McMinnville, Tennessee
Bountiful Ridge Nurseries	Princess Anne, Maryland
Bowden Greenhouses	Lenoir City, Tennessee
Boyd Nursery Company	McMinnville, Tennessee
Brech, Joseph and Sons Nursery	Brown Mills, New Jersey
Breedlove Nurseries	Tyler, Texas
Bristol Floral Company	Bristol, Texas
Bristol Nurseries, Inc	Bristol, Connecticut
Brosemer Nursery Company	Huntsville, Alabama
Brown Brothers Company	Penfield, New York
Brule Valley Nurseries	Brule, Wisconsin
Bryon Floral Gardens	Springfield, Missouri
Burr, C. R. and Company, Inc.	Manchester, Connecticut
Burton Hill Top Nurseries	Casstown, Ohio
California Rose Garden	Whittier, California
Call's Nurseries	Perry, Ohio
Cantrell, G. F. and Sons	Smithville, Tennessee
Cantrell, J. J.	Harrison, Tennessee
Cardinal Nursery and Orchard Company	McMinnville, Tennessee
Cartwright Nurseries	Collierville, Tennessee
Cedar Grove Nursery Company	Smithville, Tennessee
Central New York Nurseries	Geneva, New York
Champion Nurseries	Perry, Ohio
Chase Nursery Company	Chase, Alabama
Chattanooga Plant Farm	Chatanooga, Tennessee
Civiletto, George and Son	Fredonia, New York
Clark, Arnold C. Nursery	McMinnville, Tennessee
Clegg's Nursery	Plainfield, Illinois
Clinton Forest Nursery	Clinton, Tennessee
Cole Nursery Company	Painesville, Ohio

College Nurseries	Collegedale, Tennessee
Colonial Nurseries	New Providence, New Jersey
Commercial Nursery Company	Decherd, Tennessee
Congdon, H. E. Nursery	North Collins, New York
Conger's Nurseries	Smithville, Tennessee
Co-operative Rose Growers	Tyler, Texas
Conrad-Pyle Company	West Grove, Pennsylvania
Consolidated Nurseries, Inc.	Tyler, Texas
Cosby Nursery	Loxley, Alabama
Cottage Gardens	Lansing, Michigan
Couch Brothers Nursery Company ..	McMinnville, Tennessee
Crawford Gardens	Toledo, Ohio
Creek View Nursery	McMinnville, Tennessee
Cumberland Plateau Nursery	Crossville, Tennessee
Cumberland Nursery	Smithville, Tennessee
Cumberland Valley Nurseries, Inc. ..	McMinnville, Tennessee
CZ Nurseries	Madison, Ohio
Davis, Ben Z.	Harrison, Tennessee
Davis, R. L.	Ooltawah, Tennessee
Davis, Roy and Sons' Nursery	Mobile, Alabama
Davis, W. F.	Van Fleet, Mississippi
Davis, W. L. Nursery Company	Smithville, Tennessee
Dibrell Nursery Company	McMinnville, Tennessee
Dixie Nursery	Smithville, Tennessee
Dixie Line Nursery Company	Smithville, Tennessee
Drake, E. B. Nurseries	Winchester, Tennessee
Driver's Wholesale Nurseries	McMinnville, Tennessee
Eagle Creek Nursery Company.....	New Augusta, Georgia
Easterly Nurseries	Cleveland, Tennessee
East's Nursery	Amity, Arkansas
Economy Nursery	Phair, Texas
Edwards Nursery	Germantown, Tennessee
Eikner Nurseries	Tyler, Texas
Ellis Nurseries	Stapleton, Alabama
Emlong Nursery	Stevensville, Michigan
Emmons and Company	Newark, New York
Empire Nursery and Orchard Company ..	Baileyton, Alabama
Empire Nursery Products Company	Newark, New York
Evergreen Nurseries	Germantown, Tennessee
Evergreen Nursery Company	Sturgeon Bay, Wisconsin
Fairview Nurseries	Ft. Wayne, Indiana
Fairview Nursery Company	McMinnville, Tennessee
Farmers Nursery	Cairo, Georgia
Farmers Reliable Nursery	Smithville, Tennessee
Farmers Seed and Nursery Company	Faribault, Minnesota
Farmers Wholesale Nursery	Smithville, Tennessee
Ferndale Nursery	Askov, Minnesota
Field, Henry, Seed and Nursery Company ..	Shenandoah, Iowa
Fiore, Charles, Nurseries, Inc.	Prairie View, Illinois
Flo-Mar Gardens	San Fernando, California
Flower City, Inc.	East Rochester, New York
Flowerfield Bulb Farm	Flowerfield, New York
Ford, Howard W., Nursery	Tyler, Texas
Forest Nursery Company	McMinnville, Tennessee
Foster Nursery Company, Inc.	Fredonia, New York
Francis, Paul Mrs.	La Follette, Tennessee
Fraser, Samuel, Nursery, Inc.	Geneseo, New York
Frazier Nursery Company	Smithville, Tennessee
Fruitland Nurseries	Augusta, Georgia

Fulton Nursery Company	Smithville, Tennessee
Gardens of The Blue Ridge	Ashford, North Carolina
Garden Nursery Company	Osage, Iowa
Geiser, G. W., Fair Chance Farm	Beloit, Kansas
Genesee Valley Corporation	Danville, New York
George, James I., and Son	Fairport, New York
Gilley and Lassiter Nursery and Plant Company	Smithville, Tennessee
Girling Nursery Company	Holmesville, Mississippi
Glen Brothers, Inc.	Fairport, New York
Glenwood Nurseries, The	Fairport, New York
Globe Nurseries	McMinnville, Tennessee
Gold Chestnut Nursery	Cowen, West Virginia
Grassey Ridge Nursery	Beersheba Springs, Tennessee
Green Hill Garden Store	Nashville, Tennessee
Green Valley Nursery	Mobile, Alabama
Griffing's Nurseries	Beaumont, Texas
Grissom, J. C. and Sons	McMinnville, Tennessee
Haley, G. L., Nursery Company	McMinnville, Tennessee
Haley Seed Company	Smithville, Tennessee
Hallum, H. G., Nursery Company	McMinnville, Tennessee
Harding Brothers Nursery Company	McMinnville, Tennessee
Harris, Joseph, Company, Inc.	Rochester, New York
Harrison Brothers Nurseries	Berlin, Maryland
Harry and David, Inc.	Medford, Oregon
Hartford Farms	St. Joseph, Michigan
Harville Rose Service	Tyler, Texas
Hastings, H. G., Company	Atlanta, Georgia
Hawkersmith Nursery Company	Winchester, Tennessee
Hays, Floyd	Smithville, Tennessee
Heird, W. H.	Decatur, Tennessee
Henderson, Peter, Company	Red Bank, New Jersey
Hennings, George, Greenhouse and Nursery	Swanton, Ohio
Hermitage Nurseries	Smithville, Tennessee
Highway Gardens	McMinnville, Tennessee
Hill, D., Nursery Company	Dundee, Illinois
Hodges, J. A., Nursery	Lucedale, Mississippi
Holder, Herbert C.	Georgetown, Tennessee
Hibiscus Gardens, The	St. Paul, Minnesota
Hollande Nursery Company	Tyler, Texas
Home Garden Company	Lysander, Michigan
Hope Nursery Company	Scottsville, Texas
Horn Canna Farm	Carnegie, Oklahoma
House, L. C., and Sons	Tyler, Texas
Howard Rose Company	Hemet, California
Howell Nurseries	Knoxville, Tennessee
Huntsville Wholesale Nurseries, Inc.	Huntsville, Alabama
Ideal Nursery and Orchard Company	Smithville, Tennessee
Imlay Company, The	Zanesville, Ohio
Inter-State Nursery	Hamburg, Iowa
Jackson and Perkins	Newark, New York
Jewell Nurseries, Inc.	Lake City, Minnesota
Jewell, Ross C.	Madisonville, Tennessee
John's	Apopka, Florida
Johnson Brothers	Somerville, New Jersey
Johnson's Nursery	Baxter, Tennessee
Jones Ornamental Nursery	Nashville, Tennessee
Jordan's Nursery.....	Mobile, Alabama
Judkins, A. F. and Sons Nursery	Smithville, Tennessee
Kallay Brothers Company, The	Painesville, Ohio

Kelly Brothers Nurseries, Inc.	Dansville, Ohio
Keltonburg Nursery Company	Smithville, Tennessee
Killmer's Northern Nurseries	St. Paul, Minnesota
Kingsville Nurseries, Inc.	Kingsville, Maryland
Kirkpatrick, P. H., Mrs.	Locke, New York
Klyn, Gerard	Mentor, Ohio
Knight and Bostwick	Newark, New York
Kohankie, Henry and Son	Painesville, Ohio
Kolola Springs Nursery	Kolola, Mississippi
Krider Nursery, Inc.	Middlesburg, Indiana
Kreigers Wholesale Nursery	Bridgman, Michigan
La Bundy's Iris Garden	Memphis, Tennessee
Lockey, Warren H.	Harrison, Tennessee
Lakeland Nurseries	Faribault, Minnesota
Laurel Hill Nurseries	Beersheba Springs, Tennessee
Leach's Nurseries	Cinnaminson, New Jersey
Leeland Farms	Leesburg, Georgia
Leist, Ludwig	St. Louis, Missouri
Lewis, Chalin	Piggott, Arkansas
Lilyacres	Fairhope, Alabama
Long's Nursery	Spring Hill, Alabama
Lord's Nursery	Mobile, Alabama
Malhoney Brothers Nursery Company	Danville, New York
Martin, Joseph F., Company	Painesville, Ohio
Mason Kentucky Wonder Nursery Company	Smithville, Tennessee
Maxwell, Bowden and Rice, Inc.	Geneva, New York
May, Earl E., Seed Company	Shenandoah, Iowa
McGahan, J. V., and Son	Goodman, Missouri
McMinnville Tree Company	McMinnville, Tennessee
McClung Brothers Rose Nursery	Tyler, Texas
McDaniels, C. L.	Harrison, Tennessee
McFarland Nursery	Tyler, Texas
McIntyre, Robert	Nashville, Tennessee
Meehan, Thomas B.	Dresher, Pennsylvania
Meelen Evergreen Products	Mellen, Wisconsin
Miami Nursery Company	Tipp City, Ohio
Miller, J. E., Nurseries	Candaigua, New York
Milstead Nursery Company	McMinnville, Tennessee
Missouri Nurseries	Louisiana, Missouri
Montgomery Plant Company	Rockwood, Tennessee
Monticello Nursery Company	Monticello, Florida
Moore, Wm. C., and Company	Newark, New York
Morning Star Nursery Company	Rives, Tennessee
Mount Arbor Nurseries	Shenandoah, Iowa
Mountain View Nursery	Smithville, Tennessee
Mullican, George A., Nursery	McMinnville, Tennessee
Mullins Plant Farm	Chattanooga, Tennessee
Mulford, Hewett P., and Company, Inc.	Lebanon, Ohio
Murphy Nursery Company	Smithville, Tennessee
Murray, J. C., Nursery	Memphis, Tennessee
Naperville Nurseries, Inc.	Naperville, Illinois
National Nurseries	Biloxi, Mississippi
Natorp, W. A.	Cincinnati, Ohio
Naughton Farms, Inc.	Waxahachie, Texas
Neal Brothers, Inc.	Toledo, Ohio
Nebraska Nurseries	Lincoln, Nebraska
New Fruit Nursery Company	Smithville, Tennessee
Nigard Nursery	Herbster, Wisconsin
Noleridge Nurseries	McMinnville, Tennessee

Norris Nursery, TVA	Norris, Tennessee
North Alabama Nursery Company	Joppa, Alabama
North-Eastern Forestry Company	Cheshire, Connecticut
North Ridge Nursery	Elyria, Ohio
O'Dell's Nurseries	Oakville, Tennessee
Oliver, M., Flower Farms	Tyler, Texas
Onarga Nursery Company, Inc.	Onarga, Illinois
O'Neill, Joseph G., and Sons Nursery	Moorestown, New Jersey
Orr, M. J., Jr.	Harrison, Tennessee
Orton Nursery	Winnabow, North Carolina
Owen, T. G., and Son, Inc.	Columbus, Mississippi
Ozark Nursery Company	Tahlequah, Oklahoma
Ozarks Plant Farms, Inc.	Springfield, Missouri
Pack-True-To-Name Nursery Company	McMinnville, Tennessee
Pack, Otis and Sons Nursery	McMinnville, Tennessee
Pack, Sam	Smithville, Tennessee
Palmer, J. R.	Blackduck, Minnesota
Paramount Nurseries	West Grove, Pennsylvania
Park Nursery Company	Huntsville, Alabama
Parry Nurseries	Signal Mountain, Tennessee
Patton Nursery Company	Portland, Tennessee
Pavek, Jerry	White Lake, Wisconsin
Peach Ridge Farms	McMinnville, Tennessee
Perry, O. H., Nursery Company	McMinnville, Tennessee
Pharr Nurseries	Pharr, Texas
Piggott Nursery Company	Piggott, Arkansas
Pine Creek Nursery Company	Smithville, Tennessee
Pleasant Valley Nursery Company	Smithville, Tennessee
Pleasant View Nurseries	Troy, Ohio
Ponzer Brothers Nursery	Rolla, Missouri
Poplar Avenue Nurseries	Memphis, Tennessee
Portland Nursery Company	Portland, Tennessee
Possum Hollow Nurseries	Philadelphia, Pennsylvania
Potter, H. R., Nursery	Joelton, Tennessee
Pound Gulf Nursery	McMinnville, Tennessee
Prairie and Southwestern Floretum	Fall River, Kansas
Quaker Hill, Inc.	Newark, New York
Rainbow Hybridizing Gardens	Placeville, California
Ramsey, Buster	Harrison, Tennessee
Ramsey, Fred	Harrison, Tennessee
Ramsey, J. A., and Son	Harrison, Tennessee
Ramsey, J. L.	Harrison, Tennessee
Ramsey, Luther	Harrison, Tennessee
Ramsey, Tom	Harrison, Tennessee
Randolph Nursery and Landscape Service	Jackson, Tennessee
Rhea Floral Company	Greenville, Tennessee
Reigel Plant Company	Experiment, Georgia
Rivermont Orchids	Signal Mountain, Tennessee
Riverside Nursery	Winchester, Tennessee
Riverside Nursery	Upper Sandusky, Ohio
Riverside Nursery Company	McMinnville, Tennessee
River View Nursery	Mobile, Alabama
Roberts Strawberry Nursery	Kalamazoo, Michigan
Robinhood Brians Farms	Tyler, Texas
Rocknoll Nursery	Morrow, Ohio
Rodgers, F. S., Nursery	Charlestown, South Carolina
Roller, Levi M., and Son Nursery	Rogers, Arkansas
Romacres	Liberty Center, Ohio
Romines Plant Farm	Dayton, Tennessee

Rose City Nursery	Tyler, Texas
Rosedale Nursery	Monrovia, California
Rose Hill Seed and Nursery	Des Moines, Iowa
Rosemont Nurseries	Tyler, Texas
Russell Gardens	Spring, Texas
Sanders Nursery Company	Winchester, Tennessee
Savage, Cullen	Palmer, Tennessee
Scarff's, W. N., and Sons	New Carlisle, Ohio
Schifferli, F. E., and Son Nurseries	Fredonia, New York
Scotch Gardens of California	Redwood City, California
Scott, Glen	Birdsale, New York
Scruggs Nursery	McMinnville, Tennessee
Semmes Nurseries	Semmes, Alabama
Shadow Nursery Company	Winchester, Tennessee
Shady Lane Nursery Company	Smithville, Tennessee
Shahan Nurseries	Tullahoma, Tennessee
Shamburger, Carl, Rose Nursery	Tyler, Texas
Shanks, H. J., Mrs.	Cookesville, Tennessee
Shenstone Farm Nursery	Sharonville, Ohio
Shenandoah Nurseries	Shenandoah, Iowa
Siebenthaler Company, The	Dayton, Ohio
Sinclair Nurseries	Dayton, Tennessee
Sisk Nurseries	Winchester, Tennessee
Slatton Nursery Company	McMinnville, Tennessee
Smith Brothers Nursery Company	Concord, Georgia
Smith Brothers Nursery Company	Rock Island, Tennessee
Smith and Grizzell Nursery	McMinnville, Tennessee
Smith's Nursery	Jonesboro, Tennessee
Smith, L. P., Nursery	Memphis, Tennessee
South Side Nursery and Orchard Company	Smithville, Tennessee
Southern Nursery and Landscape Company, Inc.	Winchester, Tennessee
Southern States Nurseries	MacClenny, Florida
Southland Nurseries, Inc.	Mobile, Alabama
Springbrook Gardens	Mentor, Ohio
Spring City Nurseries	Huntsville, Alabama
Springdale Farms	Portland, Tennessee
Spring Hill Nurseries Company	Tipp City, Ohio
Standard Nursery Company	McMinnville, Tennessee
Stark Bros. Nurseries and Orchards Company	Louisiana, Missouri
Stephenson, George, Mrs.	Petersburg, Tennessee
Stern's Nurseries	Geneva, New York
Stevenson and Cox	Perry, Ohio
Stewart, H. H., and Son's Nursery Company, Inc.	Smithville, Tennessee
Stringer Brothers Nurseries	Memphis, Tennessee
Stuart, C. W., and Company	Newark, New York
Stumpp and Walter Company	New York, New York
Summerville Floral Company	Summerville, South Carolina
Suncrest Evergreen Nurseries	Johnstown, Pennsylvania
Sunny Ridge Nursery	Round Hill, Virginia
Sunnyslope Mum Gardens	San Gabriel, California
Swedberg Nursery	Battle Lake, Minnesota
Syllmar Gardens	San Fernando, California
Talisman Nurseries	Tyler, Texas
Tarleton Nurseries	McMinnville, Tennessee
Tennessee Nursery Company	Cleveland, Tennessee
TVA Forest Nursery	Wilson Dam, Alabama
Texas Nursery Company	Sherman, Texas
Texas Pecan Nursery	Tyler, Texas
Thompson Nurseries	Spring City, Tennessee

Totty, Charles H., Company, Inc.	Madison, New Jersey
Townsend's Nursery	Salisbury, Maryland
Toy's Nursery	Wilmer, Alabama
Tritschler's Greenhouses	Nashville, Tennessee
Trobaugh Nurseries	Morristown, Tennessee
Trobaugh, E. M., Mrs.	Morristown, Tennessee
Trotter, T. B.	Memphis, Tennessee
Truitt Nursery	Montgomery, Alabama
Tucker, Luther, Mrs.	Newbern, Tennessee
Underhill's Nurseries	McMinnville, Tennessee
Universal Bulb Corp.	Yonker, New York
Upton Nursery Company	Goodrich, Michigan
Ustler Brothers	Apopka, Florida
Valentine Nurseries	Cosby, Tennessee
Valley View Nurseries	McMinnville, Tennessee
Valone's Nursery	Fredonia, New York
Vanderpool's Nursery Company	Smithville, Tennessee
Van Zanten Brothers of N. Y., Inc.	Montclair, New Jersey
Vaughn's Seed Company	Western Springs, Illinois
Ventura Epiphyllum Gardens	Ventura, California
Vermay Nursery Company	Tyler, Texas
Victory Nursery	Baileyton, Alabama
Volk, William F.	Brown Mills, New Jersey
Wake Forest Nursery	Smithville, Tennessee
Walker Nurseries	Memphis, Tennessee
Walnut Grove Nursery Company	McMinnville, Tennessee
Wandaland Farm Nursery	Pleasant View, Tennessee
Warrenville Berry Nursery	Warrenville, Illinois
Washington Heights Nurseries	Knoxville, Tennessee
Watson Nursery	Monticello, Florida
Waxahachie Nursery Company	Tyler, Texas
Wayside Gardens Company	Mentor, Ohio
Weddington, J. A., and Son	Knoxville, Tennessee
Wedge Nursery	Albert Lea, Minnesota
Weeks Wholesale Rose Grower	Chino, California
Welch, M. P.	Toomsba, Mississippi
Weller Nursery Company	Holland, Michigan
Westbrook Nursery	Bremen, Georgia
West Hill Nurseries	Fredonia, New York
Western Maine Forest Nursery Company	Fryebury, Maine
Wheeling Nurseries	Wheeling, Illinois
Whitten Nurseries	Bridgman, Michigan
Wight Nurseries	Cairo, Georgia
Wilcox, J. ., and Sons, Inc.	Council Bluffs, Iowa
Wild Brothers Nursery Company	Sarcoxi, Missouri
Willmar Nursery	Willmar, Minnesota
Williams, Isaac Langley	Exeter, New Hampshire
Wilson, C. E., Nurseries	Jacksonville, Texas
Wilson County Nursery Company	Martha, Tennessee
Wilson and Sons Nursery Company	Winnsboro, Texas
Willis Nursery	Ottawa, Kansas
Winter Gardens	Perry, Ohio
Wood-Howell Nurseries, Inc.	Bristol, Virginia
Woodruff's Evergreens	Greenville, Georgia
Wrightwood Floral Company	Houston, Texas
Wyman Nurseries	Kololo Springs, Mississippi
Yoder Brothers	Barberton, Ohio
Young Brothers Nursery Company	Smithville, Tennessee

AGENTS OF NONRESIDENT NURSERYMEN

Allen, Alzona, Mrs.	Smithville, Tennessee
Baker, G. H.	Knoxville, Tennessee
Barker, S. Wm.	Louisville, Kentucky
Barnes, Bruce	Cincinnati, Ohio
Bing, W. H., Jr.	Smithville, Tennessee
Bodde, Edward H., Jr.	Ft. Thomas, Kentucky
Boss, Clay	Estill Springs, Tennessee
Breen, William	Louisville, Kentucky
Cantrell, Fred	Smithville, Tennessee
Carlisle, Van	Louisville, Kentucky
Chard, Howard S.	Columbus, Ohio
Christian, Louis R.	Joelton, Tennessee
Christian, W. M.	McMinnville, Tennessee
Clark, James H.	Hickman, Kentucky
Drake, D. L.	McMinnville, Tennessee
Emmons, J. Walter	Chattanooga, Tennessee
Fathera, W. H.	Nashville, Tennessee
Faucette, C. H.	Middletown, Kentucky
Fleming, J. H.	Virgie, Kentucky
Fuston, Bernie	Smithville, Tennessee
Fuston, Floyd	McMinnville, Tennessee
Fuston, Hoyt	Liberty, Tennessee
Fuston, O. D.	McMinnville, Tennessee
Fuston, Robert, Jr.	Liberty, Tennessee
Fuston, V. R.	Liberty, Tennessee
George, John E.	Portsmouth, Ohio
Hamilton, R. H.	Newark, New York
Hennessee, Grover	McMinnville, Tennessee
Herald, Samuel	Dunlow, West Virginia
Hillis, B. H.	McMinnville, Tennessee
Hudson, Alvin H.	Evansville, Indiana
Jones, Anna Lee, Mrs.	Paducah, Kentucky
Kemper, Clarence W.	Murray, Kentucky
Kimbler, William	Portsmouth, Ohio
Kleinhans, Robert B.	Cincinnati, Ohio
Laswell, Elmer E.	Shepherdsville, Kentucky
Mock, William J.	Evansville, Indiana
Moley, Ralph C.	Ludlow, Kentucky
Martin, O. W.	McMinnville, Tennessee
McAndrews, John L.	Indianapolis, Indiana
McCann, A. B.	Cincinnati, Ohio
McKnight, Morris Wiles	Milton, Tennessee
McKnight, O. P.	Murfreesboro, Tennessee
McQuiston, John A.	Louisville, Kentucky
Mershon, Hubert	Portsmouth, Ohio
Miller, Bruce	Louisville, Kentucky
Millican, L. L.	Gasaway, Tennessee
Morgan, Donald L.	Louisville, Kentucky
Noble, C. A.	Huntington, West Virginia
Pemberton, R. W.	Hopkinsville, Kentucky
Petty, Chester W.	Erlanger, Kentucky
Potter, K. B.	Joelton, Tennessee
Priest, John R.	Calhoun, Kentucky
Quinn, James E., Jr.	Louisville, Kentucky
Ridgeway, James B.	Cincinnati, Ohio
Ridgeway, William B.	Cincinnati, Ohio
Ridgeway, T. M.	Mounds, Illinois

Roach, David	Louisville, Kentucky
Robinson, Erbie	Smithville, Tennessee
Rodman, Eugene V.	Ashland, Kentucky
Rollins, James C.	Wickliffe, Kentucky
Sanders, F. C.	Central City, Kentucky
Sanders, Joseph G.	Mayfield, Kentucky
Sarver, B. J.	Wurtland, Kentucky
Sauter, Jack T.	Evansville, Indiana
Schuh, Robert K.	Ft. Thomas, Kentucky
Smith, Henry J.	Buechel, Kentucky
Smith, J. R.	Bowling Green, Kentucky
Spencer, C. V.	Dowelltown, Tennessee
Spencer, W. B.	McMinnville, Tennessee
Stephens, D. C.	Liberty, Tennessee
Taylor, W. O.	Smithville, Tennessee
Terris, Stevens F.	Ashland, Kentucky
Threlkeld, J. H.	Clay, Kentucky
Threlkeld, Mansel D.	Clay, Kentucky
Weber, Herman M.	Louisville, Kentucky
Williams, Emil Johnson	Madisonville, Kentucky
Williams, E. R.	Louisville, Kentucky
Willis, Harold D.	Louisville, Kentucky
Winfrey, J. S.	Hickman, Kentucky

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