

Some Items of Interest to Kentucky Nurserymen

For the Year Ended June 30, 1949

By W. A. Price
and
Howard G. Tilson



Kentucky Agricultural Experiment Station
University of Kentucky
Lexington

CONTENTS

	Page
Kentucky Revised Statutes—Sections 249.010 to 249.990	3
Summary of Requirements of Kentucky Nursery Inspection Law	6
“Nursery Stock” Defined	7
Requirements for Shipment of Nursery Stock into Other States	7
Plant Quarantine Officials	9
Local Pests	14
Inspection Requirements for Certain Classes of Nursery Material	16
Kentucky Nurserymen who Received Certificates of Inspection 1948-49	18
Nursery Dealers	20
Nonresident Nurseries	22
Agents of Non-Resident Nursery	29

**SOME ITEMS OF INTEREST TO KENTUCKY NURSERYMEN,
FOR THE YEAR ENDED JUNE 30, 1949**

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.

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

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

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 discretion 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 requires 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 and will be furnished at a nominal cost to the shippers by the following states: 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	Agents fee	Special tag	Posted Bond
Alabama	Yes	Reciprocal	\$1	No	None
Arizona	No	None	None	No	None
Arkansas	Yes	Reciprocal	\$1	Yes	Reciprocal
California	No	None	None	No	None
Canada	Yes	None	None	Yes ¹	None
Colorado	Yes	None	None	No	None
Connecticut	No	None	None	No	None
Delaware	Yes	None	None	No	None
Florida	Yes	None	None	Yes	None
Georgia	Yes	Reciprocal	\$1	Yes	\$1000 ²
Idaho	Yes	\$5 to \$15	\$1	No	\$1000 ²
Illinois	Yes	None	None	No	None
Indiana	Yes	None	\$1	No	None
Iowa	Yes	Reciprocal	None	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	\$1	No	None
Minnesota	Yes	Reciprocal	Reciprocal	No	None
Mississippi	Yes	Reciprocal	None	No	None
Missouri	Yes	None	None	No	None
Montana	Yes	\$5 to \$25	\$25	No	None
Nebraska	Yes	Reciprocal	\$1	No	None
Nevada	No	None	None	No	None
New Hampshire	No	None	None	No	None
New Jersey	Yes	Reciprocal	None	No	None
New Mexico	Yes	\$10	\$25	Yes	None
New York	No	None	None	No	None
North Carolina	Yes	Reciprocal	None	No	\$1000 ⁴
North Dakota	Yes	Reciprocal	None	No	None
Ohio	Yes	Reciprocal	\$1	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	\$1	No	None
Tennessee	Yes	Reciprocal	Reciprocal	No	\$5000 ⁴
Texas	Yes	Reciprocal	None	No	None
Utah	Yes	\$10 ³	None	No	None
Vermont	No	None	None	No	None
Virginia	No	Reciprocal	Reciprocal	No	None
Washington	No	Reciprocal	\$1	No	None
West Virginia	Yes	None	\$1	No	None
Wisconsin	Yes	None	None	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. H. B. Hungerford, 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—Lloyd E. Adams, 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—R. 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—Professor G. M. Bentley, State Entomologist and Plant Pathologist, 65 Biology Building, University of Tennessee, Knoxville
- Texas—Walter T. McKay, Chief, Division of Plant Quarantine, State Department of Agriculture, Austin
- Utah—Don R. Merkle, State Entomologist, State Department of Agriculture, Salt Lake City
- Vermont—Dr. M. B. Cummings, State Nursery Inspector, Agricultural Experiment Station, Burlington
- Virginia—Dr. 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

Federal Quarantine 38 Revised

Federal Quarantine Number 38, on account of Black Stem Rust was amended by the Bureau of Entomology and Plant Quarantine to become effective May 1, 1949. The provisions now in force are: (a) All rust resistant species and varieties of barberry, mahonia and mahoberberis may be shipped interstate only under Federal permit; (b) the fruits and seeds of rust resistant species may be moved into or between the protected states only under Federal permit but may be moved between unprotected states without restriction; (c) nurserymen who wish to ship resistant species and varieties of barberry, mahonia and mahoberberis interstate must make application for inspection to the Bureau of Entomology and Plant Quarantine, Washington 25, D. C., before May 15 of each year; (d) species and varieties of barberry, mahonia and mahoberberis not known to be resistant to the fungus (*Puccinia graminis*) which causes black stem rust of small grains are prohibited movement from one state to another; (e) the protected states, from which all rust susceptible species of barberry, mahonia and mahoberberis plants are being eradicated are: Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Pennsylvania, South Dakota, Virginia, Washington, West Virginia, Wisconsin and Wyoming; (f) plants of barberry and mahoberberis under two seasons growth and mahonia plants under one seasons growth are not permitted interstate movement. Parts of mahonia plants, without roots and intended for decorative purposes only may be shipped interstate without restrictions.

The following species and varieties of barberry, mahonia and mahoberberis are designated as rust-resistant:

- Berberis beaniana
- Berberis buxifolia
- Berberis buxifolia nana
- Berberis candidula
- Berberis chenaultii
- Berberis circumserrata
- Berberis concinna
- Berberis darwinii
- Berberis gagnepaini
- Berberis gilgiana
- Berberis horvathii
- Berberis julianae
- Berberis koreana
- Berberis linearifolia var. Orange King
- Berberis mentorensis
- Berberis potanini
- Berberis sanguinea
- Berberis sargentiana
- Berberis stenophylla

Berberis stenophylla diversifolia
Berberis stenophylla nana compacta
Berberis thunbergii
Berberis thunbergii atropurpurea
Berberis thunbergii erecta
Berberis thunbergii "globe"
Berberis thunbergii "golden"
Berberis thunbergii maximowiczii
Berberis thunbergii minor
Berberis thunbergii pluriflora
Berberis thunbergii "thornless"
Berberis thunbergii "variegata"
Berberis triacanthophora
Berberis verruculosa
Mahonia aquifolium
Mahonia bealei
Mahonia dictyota
Mahonia nervosa
Mahonia pinnata
Mahonia repens

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 Beetle

Substantial increase in numbers of Japanese beetles was reported from several states bordering Kentucky. These states are: North Carolina, Virginia, West Virginia and Ohio. The risk of bringing Japanese beetle into Kentucky in connection with nursery stock has increased accordingly. Every possible effort is being made to advise the nurserymen in such a manner as to lessen the risk of spreading Japanese beetle. The greatest danger of importing Japanese beetle into Kentucky appears to be in connection with balled or potted plants of uncertain origin. Growers and dealers of boxwoods have been unusually active in recent years. Some of these boxwoods are apparently collected from noncommercial grounds, the location of which is not well known.

Nursery permits have been refused to nursery dealers who wish to import boxwoods and other nursery stock of questionable origin. Every Kentucky nurseryman should ask to see the certificate or permit issued by the Kentucky State Entomologist before buying any nursery stock from a nonresident dealer or hauler or from anyone whose nursery grounds are not well known. Also he should instruct his customers to demand the opportunity to see the Kentucky certificate or permit. He should not be satisfied with a shipping tag displayed by the unknown peddler. Anyone can secure shipping tags from any number of well advertised nurseries.

By cooperation and constant vigilance Japanese beetles may be kept out of the state for many years to come.

White-Fringed Beetle

The discovery of the white-fringed beetle infestations in Birmingham, Alabama in 1947 and in Memphis, Tennessee in 1948 very pointedly indicates the possibilities of an infestation occurring in Kentucky in the near future. In Georgia the first white-fringed beetles were reported in 1946. The known infested area in that state now includes 53 counties. South Carolina now has two infested counties, while North Carolina has fifteen infested counties.

The area now known to be infested with white-fringed beetle includes parts of the four states, Alabama, Florida, Louisiana and Mississippi, in which the original infestation was found in 1936; and the states of North Carolina, South Carolina, Georgia and Tennessee in which infestations have been discovered later.

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. It is advisable to apply control measures at this stage. Spray with liquid lime sulphur at the rate of 1 part to 6 parts water. The timing of the spray to coincide with first stages of growth of the plants is very important. Thorough coverage of both sides of leaves and all parts of the stems is essential for satisfactory control. It is difficult to cover the underside of the leaves when the pressure from the spray nozzle pushes the leaves down. At least one repeat application one year later is advisable as a safety measure.

Remember that lime sulphur will seriously discolor painted buildings, especially those with white surfaces.

During summer months the young crawlers of euonymus scale can be killed with a spray of 1 lb. of 25% wettable parathion per 100 gallons of water. This is only a stop-gap measure as it will not kill the adults protected by the armour.

Root Knot Nematodes

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, for-

sythia, 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% 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. Heat sterilization of greenhouse soils will very effectively kill 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, 1948-49

Adcock, Mrs. W. A.—Hopkinsville, R. 3- $\frac{1}{4}$ acre	Perennials, bulbs
Arrow-Wood Nursery	
W. C. O'Conner—Warsaw—4 acres	Ornamental
Arterburn, Paul Nursery	
Mrs. Paul Arterburn—St. Matthews—6 acres	Ornamental
Barnett's Nursery	
A. E. Barnett—Murray—1 acre	Ornamental
Barr and Leichhardt Nursery—Bowling Green—6 acres	Ornamental
Bel-Bar Acres	
Mrs. Belle Kistler—Anchorage, R. No. 1—2 acres	Perennials, bulbs
Bellfonte Nursery	
Orval Lycan—Ashland—10 acres	General
Big Sandy Nursery	
W. S. Burris—Ashland, 329-23rd St.— $\frac{1}{4}$ acre	Ornamental
Bold Hill Nursery	
V. C. Razor—Flemingsburg— $\frac{1}{4}$ acre	Fruits
Bolin, Mrs. Henry—Clinton— $\frac{1}{4}$ acre	Perennials, bulbs
Brashear Flower Shop and Greenhouse—Hazard— $\frac{1}{2}$ acre	Ornamental
Carter Nursery	
H. V. Pack—Carter—1 acre	General
Cherry, The Florist—Paducah	Greenhouse
Chick's Nursery	
C. D. Chick—Marion—2 acres	General
Clark, Joe A.—Webster— $\frac{1}{4}$ acre	Fruits
Clay Nursery	
J. H. Threlkeld—Clay—5 acres	General
Clyffty Evergreen Gardens	
D. L. Parsons—Catlettsburg—2 acres	Ornamental
Crawford, I. T.—Murray—1 acre	Gladioli
Crume Nursery & Landscaping	
Co., T. C. Crume—Florence—25 acres	General
Curry, J. G.—Hawesville	Sweetpotato plants
Dieterich, C. P. & Bro.—Maysville— $\frac{1}{8}$ acre	Ornamental
Dixie View Nurseries	
A. L. Heger—Covington, Box 423—60 acres	General
Donaldson Nurseries	
J. F. Donaldson—Sparta and Warsaw—30 acres	General
Dressman, J. A.—Covington, R. No. 5—2 acres	Tulip bulbs
Durrett, Lydean—Louisville, 4341 Preston Highway—1 acre	Ornamental
Elizabethtown Florist and Nursery	
William Shouse—Elizabethtown—2 acres	Ornamental
England's Nursery	
A. G. England—Louisville, 4045 Preston Highway—3 acres	Ornamental
Evans Brothers—Christine— $\frac{1}{4}$ acre	Fruits
Evans Gardens—Lexington, 904 N. B'way.—2 acres	Perennials, bulbs
Fike Nurseries	
J. W. Fike—Hopkinsville—60 acres	General
Gardiner, Boone Nurseries	
Dan Gardiner—Louisville, R. No. 6—15 acres	General
Gordon, Fred L. Nursery—Louisville, 5402 Newcut Rd.—5 acres	General
Gramse Nursery—Paducah—5 acres	General
Grant Gardens—Louisville, 412 Oread Road— $\frac{1}{4}$ acre	Iris, lillies
Green River Home Nursery	
W. A. Sandefur—Robards—6 acres	General
Haag Nurseries—Jeffersontown—25 acres	General
Hall-Lillard Nursery—Jeffersontown—5 acres	General
Hartman, Walter Nursery—Louisville, R. No. 6—2 acres	Perennials, bulbs

Hendrick Nursery—Bowling Green—2 acres	Ornamental
Higdon Nursery—Mayfield—2 acres	General
Highland Fruit Farm—Waynesburg—2 acres	Strawberry plants
Highland Nursery Company—Ft. Thomas, 62 Cromwell Ave.—2 acres ..	Ornamental
Hillenmeyer Nurseries—Lexington—250 acres	General
Hill's Nursery	
Wm. Hill—Warsaw—50 acres	General
Humphrey's Landscape Service	
A. G. Humpherys—Mt. Sterling—10 acres	General
Johnstone, Allie—Calvert City—2 acres	General
Kelley, Asa—Fordsville—1 acre	Fruits
Keltner, Hobart—Pickett—1 acre	Fruits
Kentucky Department of	
Forestry—Louisville (Ky. State Fair Ground)—1 acre	Tree seedlings
Kentucky Department of	
Forestry—Dawson Springs, Pennyriple Park—3 acres	Tree seedlings
Kentucky Division of Fish	
and Game—Frankfort—5 acres	Native plants
Klein Nursery and Floral Company—Crestwood—50 acres	General
Korfhage, Nursery and Florist	
Louis Korfhage—Shively—10 acres	General
Laurel Nursery	
Jake Whittenback—London—½ acre	Ornamental
Leeming Nursery	
Bruce Leeming—Shively—5 acres	General
Lindburg's Nursery—Lexington, Rose Mill Road—5 acres	General
Luckett Florist—Owensboro, Hartford Road	Greenhouse
Martin's Nursery—Carrollton—25 acres	General
McCutcheon's Greenhouses,—Paducah, Cairo Road	Greenhouse
Metcalf Wholesale Florist—Hopkinsville	Greenhouse
Mink's Nursery	
Wm. Mink—London—1 acre	General
Morgerson's Flowers—Lexington, Clays Mill Road—¼ acre	Perennials, bulbs
Mt. Pleasant Gardens—Ft. Thomas, 1810 N.	
Ft. Thomas Avenue—10 acres	General
Murray Nursery & Florist—Murray—2 acres	Ornamental
Nick's Nursery—Anchorage—25 acres	Ornamental
Perennial Farms—Louisville, R. No. 1—4 acres	Perennials, bulbs
Piper Nursery—Clinton—2 acres	Fruits
Pomona Nurseries—Bowling Green—5 acres	General
Ray, Carl Company—St. Matthews—10 acres	General
Reynolds Nursery	
Arthur Reynolds—Bondville—10 acres	General
Ridgeway Nursery—St. Matthews—5 acres	General
Sanders Bros. Nursery—Paducah, 712 Ky. Ave.—5 acres	Ornamental
Schmaus, Roy—Benton, R. No. 2—2 acres	Ornamental
Schneidman Greenhouses	
John Schneidman—Paducah—5 acres	Ornamental
Shupe Nursery—Sedalia—5 acres	General
Singer Gardens	
J. S. Singer—Stamping Ground—5 acres	Ornamental
Smits Greenhouses—Paris—5 acres	Ornamental
Soil Conservation Service—Paducah—2 acres	Erosion Control
Spring Hill Nursery	
Roscoe Johnson—Ashland, 2114 Blackburn Avenue—4 acres	Ornamental
Todd County Nursery	
J. M. Green—Trenton—1 acre	Ornamental
Valley View Farm	
Cicero Adkins—Hawesville	Sweetpotato plants
Walker, Kingsley Company—Louisville, Walker Ave.—2 acres	Ornamental
Wallitsch Nurseries—Louisville, R. No. 6—2 acres	Ornamental

Walnut Lawn Farm	
Robert L. James—Lexington, Military Rd.—2 acres	General
Watkins, Leroy Nursery—Owensboro, Livermore Rd.—3 acres	Ornamental
Webb, S. T. and Son—Eubank—1½ acres	Strawberry plants
Webb's Evergreen Nursery	
R. F. Webb—Warsaw—½ acre	Ornamental
Wettstain, H. C.—Lewisport	Sweetpotato plants
Wilder, R. G., Nursery—Louisville, R. No. 6—1 acre	Ornamental
Wildwood Nursery	
Ralph Childers—Ashland, 2506 S. 29th Street—1 acre	Ornamental
Willadean Nurseries	
A. L. Kidwell—Sparta—60 acres	General
Whittinghill, Lonnie M.—Love—1 acre	General
Whittinghill, Samuel D.—Love—¼ acre	Fruits
Yopp Nursery—Paducah—2 acres	Ornamental

NURSERY DEALERS

Alexander, Carrol A.	Newport
Alexander Landscape Service	Campbellsville
Allen, William M.	Chicago, Ill.
Arp Rose Inc.	Tyler, Texas
Ashby, Sterett	Cloverport
Bacon, J. & Sons	Louisville
Ball, H. G.	Madisonville
Bezold, Anthony	Newport
Bomar-Summers	Louisville
Brown, Clarence	Versailles
Bunton Seed Company	Louisville
Cain, Jake	Madisonville
Davey Tree Expert Company	Crestwood
Dow Drug Company	Cincinnati, Ohio
Dyess, Jim	Louisville
Ferguson, Lewis E.	Louisa
Fields, R. G.	Lexington
Flower Shop	Russell Springs
Gale's Flowers	Louisville
Grant, W. T.	Louisville
Green, H. L. Co., Inc.	Louisville
Harris, Ennis	Versailles
Maupf, Fred, Florist	Louisville
Hill, Geo. D.	Dreyfus
Hinkle, Buckner	Paris
Hoelzl, J. F., Landscape Company	Louisville
House Plant & Nursery Store	Louisville
Jenkins Landscape Service	Lyndon
Karcher, Theodore B.	Louisville
Kaufman Straus Company, Inc.	Louisville
King, H.	Central City
Kresege, S. S. Company No. 56	Louisville
Kresege, S. S. Company	Lexington
Kresege, S. S. Company	Paducah
Kresege, S. S. Company	Covington
Kresege, S. S. Company	Newport
Kresege, S. S. Company	Owensboro
Kresege, S. S. Company No. 457	Louisville
Kress, S. H. & Company	Ashland
Kress, S. H. & Company	Hopkinsville
Kress, S. H. & Company	Winchester
Lose Brothers	Louisville
Lynch, Edward P.	Frankfort

Madison Paint & Linoleum Company	Covington
Martin, G. L.	Madisonville
McCullough, J. Chas., Seed Company	Cincinnati, Ohio
McCrary Stores Corp.	Louisville
Michler Florist	Lexington
Miles, H. C.	Louisville
Miller, Earle C.	Louisville
Murphy, G. C. Company	Maysville
Murphy, G. C. Company	Paintsville
Murphy, G. C. Company	Pineville
Murphy, G. C. Company	Ashland
Newberry, J. J. Company	Bardstown
Newberry, J. J. Company	Corbin
Newberry, J. J. Company	Cynthiana
Newberry, J. J. Company	Danville
Newberry, J. J. Company	Elizabethtown
Newberry, J. J. Company	Frankfort
Newberry, J. J. Company	Glasgow
Newberry, J. J. Company	Harlan
Newberry, J. J. Company	Hazard
Newberry, J. J. Company	Henderson
Newberry, J. J. Company	Lawrenceburg
Newberry, J. J. Company	Lebanon
Newberry, J. J. Company	Louisville
Newberry, J. J. Company	Mayfield
Newberry, J. J. Company	Mt. Sterling
Newberry, J. J. Company	Owensboro
Newberry, J. J. Company	Paris
Newberry, J. J. Company	Pineville
Newberry, J. J. Company	Richmond
Newberry, J. J. Company	Somerset
Newberry, J. J. Company	Versailles
Newberry, J. J. Company	Winchester
Ostrander, John O., Landscape Service	Louisville
Pack, Buford	Danville
Perrelli, Joseph	Anchorage
Purcell's	Lexington
Renfrow, H. E.	Beaver Dam
Reynolds, Walter	Bondville
Riesenberg, Anthony J.	Ft. Thomas
Schmidt, Edw., Jr.	Covington
Scott-Burr Stores Corp.	Ashland
Scott-Burr Stores Corp.	Harlan
Scott-Burr Stores Corp.	Middlesboro
Sears, Roebuck & Company	Lexington
Setters, Howard	Mt. Sterling
Small, George	Louisville
Snyder, Ben, Inc.	Louisville
Stoke, Louis, Jr.	Louisville
Walgreen Drug Store	Lexington
Walgreen Drug Store, 790 Eastern Pkwy	Louisville
Walgreen Drug Store, 401 Jefferson St.	Louisville
Walgreen Drug Store, 526 South 4th.	Louisville
Walgreen Drug Store, 661 South 4th.	Louisville
Walgreen Drug Store, 972 Baxter Ave.	Louisville
Walgreen Drug Store	Owensboro
Walgreen Drug Store	Paducah
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
Allen, Mrs. Alonzo	Smithville, Tennessee
Allen Nurseries & Seed House	Geneva, Ohio
Ammon, A. G. Nursery	Chatsworth, New Jersey
Andrews, The Nursery Company	Fairbault, Minnesota
Anthony Lake Nursery	Pineola, North Carolina
Arcadia Rose Company	Newark, New York
Arp Nursery Company	Tyler, Texas
Athens Nursery Company	Athens, Alabama
Azalea Point Nursery	Mobile, Alabama
Bagwell, G. W.	Chattanooga, Tennessee
Bailey, J. V. Nursery	Newport, Minnesota
Baker Nurseries	Higginson, Arkansas
Baker, Wm. Horace, Nurseries	Baileyton, Alabama
Banther, A. J.	Harrison, Tennessee
Banther, Glenn A.	Harrison, Tennessee
Barker Brothers Nursery	McMinnville, Tennessee
Baxter Nursery	Baxter, Tennessee
Beechwood Nursery & Bulb Company	Fairport, New York
Belgian Azaleas, Inc.	Fern Park, Florida
Bernath's Nursery	Poughkeepsie, New York
Berry Plant Nursery	Smithville, Tennessee
Berryhill Nursery Company	Springfield, Ohio
Bing's Landscape Company	Nashville, Tennessee
Blaser's Nurseries	Tallavast, Florida
Bluebonnet Rose Nursery	Tyler, Texas
Bobbink & Atkins Nursery	East Rutherford, New Jersey
Bosley, The Nursery	Mentor, Ohio
Bouldin Wholesale Nursery	McMinnville, Tennessee
Bountiful Ridge Nurseries	Princess Anne, Maryland
Boyd Nursery Company	McMinnville, Tennessee
Braswell Nurseries	Smithville, Tennessee
Breedlove Nurseries	Tyler, Texas
Bristol Nurseries, Inc.	Bristol, Connecticut
Brown Brothers Company	Penfield, New York
Brown, J. B.	Baxter, Tennessee
Burr, C. R. & Co., Inc.	Manchester, Tennessee
Burton's Hill Top Nurseries	Casstown, Ohio
Bryne Landscape Service, Inc.	Dickson, Tennessee
Byron Floral Garden	Springfield, Missouri
Call's Nurseries	Perry, Ohio
Cardinal Nursery & Orchard Company	McMinnville, Tennessee
Carter, F. I. & Sons	Tewksbury, Massachusetts
Cartwright Nurseries	Collierville, Tennessee
Cato's Nursery	Bainbridge, Georgia
Central New York Nurseries	Geneva, New York
Champion Nurseries	Perry, Ohio
Chase Nursery Company	Chase, Alabama
Clark, Arnold C., Nursery	McMinnville, Tennessee
Cole Nursery Company	Painesville, Ohio
Colonial Nurseries	Summitt, New Jersey
Commercial Nursery Company	Decherd, Tennessee
Conard-Pyle Company, The	West Grove, Pennsylvania
Congdon, H. E., Nursery	North Collins, New York
Conger's Nurseries	Smithville, Tennessee
Consolidated Nurseries, Inc.	Tyler, Texas
Cormany Nurseries, The	Springfield, Tennessee
Cottage Gardens	Lansing, Michigan
Couch Bros. Nursery Company	McMinnville, Tennessee
Crawford Gardens	Toledo, Ohio
Cumberland Valley Nurseries, Inc.	McMinnville, Tennessee

CZ Nurseries, Inc., The	Madison, Ohio
Davis, W. F.	Van Fleet, Mississippi
Davis, W. L., Nursery Company	Smithville, Tennessee
Dixie Line Nursery Company	Smithville, Tennessee
Dodd, Ben E.	Martin, Tennessee
Driver's Wholesale Nurseries	McMinnville, Tennessee
Dunlap Nurseries	Knoxville, Tennessee
Eagles Nursery	Benton Harbor, Michigan
East's Nursery	Amity, Arkansas
Economy Nursery	Little Silver, New Jersey
Elkner Nurseries	Tyler, Texas
Elwood Hubbs Nursery	Palmyra, New Jersey
Emlong Nurseries	Stevensville, Michigan
Emmons & Company	Newark, New York
Emmons & Company, Inc.	Tyler, Texas
Empire Nursery	Tyler, Texas
Empire Nursery & Orchard Company	Baileyton, Alabama
Empire Nursery Products Company, Inc.	Newark, New York
Empire Nursery Products Company, Inc.	Tyler, Texas
Evergreen Nursery Company	Sturgeon Bay, Wisconsin
Fair Chance Farm	Beloit, Kansas
Fairview Nurseries, Inc.	Ft. Wayne, Indiana
Fairview Nursery Company	McMinnville, Tennessee
Farmers Reliable Nursery	Smithville, Tennessee
Farmers Seed and Nursery Company	Faribault, Minnesota
Farmers Wholesale Nursery	Smithville, Tennessee
Farris Florist	Clarksville, Tennessee
Ferndale Nursery	Askov, Minnesota
Field, Henry, Seed & Nursery Company	Shenandoah, Iowa
Finck Floral Company	Kirkwood, Missouri
Fiore, Charles, Nurseries, Inc.	Prairie View, Illinois
Flo-Mar Gardens	San Fernando, California
Flower City Nurseries	Morrison, Tennessee
Flower City, Inc.	East Rochester, New York
Flowerfield Bulb Farm	Flowerfield, New York
Forest Nursery Company, Inc.	McMinnville, Tennessee
Ford, Howard W., Nursery	Tyler, Texas
Foster Nursery Company	Bessemer, Alabama
Francis, Mrs. Paul	LaFollette, Tennessee
Frazier Nursery Company	Smithville, Tennessee
Fremont, The Nursery	Fremont, Ohio
French Creek Nurseries	Lorain, Ohio
Fruitland Nurseries	Augusta, Georgia
Fulton Nursery Company	Smithville, Tennessee
Gall Nursery	Geneva, Ohio
Garden Acres Nursery	Irvington, Alabama
Gardens of the Blue Ridge	Ashford, North Carolina
Gardner Nursery	Omaha, Iowa
Geneva Nursery Company	Geneva, New York
General Nursery Company	Brule, Wisconsin
George, James I. and Son	Fairport, New York
Gilley & Lassiter Nursery & Plant Company	Smithville, Tennessee
Glen Bros., Inc.	Fairport, New York
Globe Nurseries	McMinnville, Tennessee
Gold Chestnut Nursery	Cowan, West Virginia
Grassey Ridge Nursery	Beersheba Springs, Tennessee
Green Nursery	Troup, Texas
Griffing's Nurseries	Beaumont, Texas
Haley, G. L., Nursery Company	McMinnville, Tennessee
Haley Nursery Company	Smithville, Tennessee
Hallum, H. G., Nursery Company	McMinnville, Tennessee
Hames Strawberry Nursery	Goodman, Missouri
Hanson, Irvin W.	Wilmar, Minnesota

Harding Bros. Nursery Company	McMinnville, Tennessee
Harris, Joseph, Company, Inc.	Rochester, New York
Harrison Bros. Nurseries	Berlin, Maryland
Harville Rose Service	Tyler, Texas
Hastings, H. G., Company	Atlanta, Georgia
Hawkersmith Nursery Company	Winchester, Tennessee
Hays, Floyd	Smithville, Tennessee
Heid, H. J.	Mobile, Alabama
Henderson, Peter, Company Nursery	Red Bank, New Jersey
Hennings, George, Greenhouse & Nursery	Swanton, Ohio
Hermitage Nurseries	Smithville, Tennessee
Hibiscus Gardens, The	St. Paul, Minnesota
Highway Gardens	McMinnville, Tennessee
Hill, D., Nursery Company	Dundee, Illinois
Holder, Herbert C.	Georgetown, Tennessee
Hollandia Gardens, The	South Vienna, Ohio
Home Garden Company	Lysander, New York
Home Nurseries	Concord, Georgia
Hope Nursery Company	Scottsville, Texas
Horn Canna Farm	Carnegie, Oklahoma
Hostetler, George M.	Westover, Maryland
House, L. C., & Sons Rose Growers	Tyler, Texas
Howell, Joe N.	Knoxville, Tennessee
Howell Nurseries	Knoxville, Tennessee
Hudnall Rose Nursery	Tyler, Texas
Huntsville Wholesale Nurseries, Inc.	Huntsville, Alabama
Ideal Nursery & Orchard Company	Smithville, Tennessee
Imlay Company	Zanesville, Ohio
Inland Bulb Company	Wilmington, Delaware
Irving College Nursery	McMinnville, Tennessee
Inter-State Nurseries	Hamburg, Iowa
Jackson & Perkins Company	Newark, New York
Jardin Des Iris	Battle Creek, Michigan
Jewell Nurseries, Inc.	Lake City, Minnesota
John's	Apopka, Florida
Jones Ornamental Nursery	Nashville, Tennessee
Joppa Nursery Company	Joppa, Alabama
Jordan Nurseries	Milledgeville, Georgia
Jordan's Nursery	Mobile, Alabama
Judkins, A. F., & Sons Nursery	Smithville, Tennessee
Kahn, S.	Staten Island, New York
Kallay Brothers Company	Painesville, Ohio
Kelley Brothers Nurseries	Dansville, New York
Killmer's Northern Nurseries	St. Paul, Minnesota
Kingsville Nurseries, Inc.	Kingsville, Maryland
Kirkpatrick, Mrs. P. H.	Middlesex, New York
Klyn, Gerard K.	Mentor, Ohio
Knight & Bostwick	Newark, New York
Knight & Bostwick	Tyler, Texas
Kohankie, Henry & Son	Painesville, Ohio
Krider Nurseries, Inc.	Middlebury, Indiana
Krieger's Wholesale Nursery	Bridgman, Michigan
Lackey, Warren H.	Harrison, Tennessee
Lagomarsino, F., & Sons	Sacramento, California
Lakeland Nurseries	Faribault, Minnesota
Leaches Nurseries	Cinnaminson, New Jersey
Leamon, Fred	Ooltewah, Tennessee
Lightfoot, John, & Son	Birchwood, Tennessee
Lilyacres	Fairhope, Alabama
Lookout Nursery, Inc.	Chattanooga, Tennessee
Lord's Nursery	Creighton, Alabama
Love's Nurseries	Smithville, Tennessee
Maddux Nursery	Madison, Tennessee

Maloney Bros. Nursery Company, Inc.	Danville, New York
Martin, Joseph E., Company, Inc.	Painesville, Ohio
Martins Rose Nursery	Arp, Texas
Mason Kentucky Wonder Nursery Company	Smithville, Tennessee
Maxwell, Bowden & Rice, Inc.	Geneva, New York
May, Earl E., Seed Company	Shenandoah, Iowa
McClung Bros. Rose Nursery	Tyler, Texas
McFarland, R. V.	Tyler, Texas
McIlhenny, E. A.	Avery Island, Louisiana
McIntyre, Robert, Nursery	Nashville, Tennessee
McMinnville Tree Company	McMinnville, Tennessee
Meehan, Thomas B., Company	Dresher, Pennsylvania
Mellen 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
Monticello Nursery Company	Monticello, Florida
Moore, Wm. C., & Company, Inc.	Newark, New York
Morning Star Nursery Company	Rives, Tennessee
Moseley, G. M.	Menlo, Georgia
Mount Arbor Nurseries	Shenandoah, Iowa
Mount Leo Nursery Company	McMinnville, Tennessee
Mt. Upton Iris Gardens	Mt. Upton, New York
Mountain Ornamental Nursery	McMinnville, Tennessee
Mountain View Nursery Company	McMinnville, Tennessee
Mulford, Hewett P., & Company	Lebanon, Ohio
Mullican, George A., Nursery	McMinnville, Tennessee
Murphy Nursery Company	Smithville, Tennessee
Naperville Nurseries, Inc.	Naperville, Illinois
National Nurseries	Biloxi, Mississippi
Natorp, W. A., Company	Cincinnati, Ohio
Naughton Farms, Inc.	Waxahachie, Texas
Neal Brother, Inc.	Toledo, Ohio
Nebraska Nurseries	Lincoln, Nebraska
New Delta Nursery	Jackson, Mississippi
New Era Chestnut Nursery	Round Hill, Virginia
New Fruit Nursery	Smithville, Tennessee
Nicholson's	Dechard, Tennessee
Norcross, H. B. & C. L., Nursery	Mt. Holly, New Jersey
North-Eastern Forestry Company	Cheshire, Connecticut
Offenberg, Paul	Columbus, Ohio
Oliver, M., Flower Farms	Tyler, Texas
Onarga Nursery Company, Inc.	Onarga, Illinois
O'Neill, Joseph G., & Son	Moorestown, New Jersey
Orr, M. J. Jr.	Harrison, Tennessee
Owen, T. G., & Son	Columbus, Mississippi
Pack, Otis, & Sons Nursery	McMinnville, Tennessee
Pack-True-To-Name Nursery Company	McMinnville, Tennessee
Palmer, J. R.	Blackduck, Minnesota
Pan Handle Nursery	McMinnville, Tennessee
Park Nursery Company	Huntsville, Alabama
Parry Nurseries	Signal Mountain, Tennessee
Parsley Bros. Nursery Company	Smithville, Tennessee
Patrick Nursery Company	McMinnville, Tennessee
Pearsall & Brosomer Nursery & Greenhouse	Huntsville, Alabama
Penzer Bros. Nursery	Rella, Missouri
Perry, O. H., Nursery	McMinnville, Tennessee
Pharr Nurseries	Pharr, Texas
Phillips, S. M., Nursery Company	Smithville, Tennessee
Pine Creek Nursery Company	Smithville, Tennessee
Pinkston's Nurseries	Parrott, Georgia
Pleasant Valley Nursery Company	Smithville, Tennessee

Pontiac Nursery Company	Romeo, Michigan
Popular Avenue Nurseries	Memphis, Tennessee
Portland Nursery Company	Portland, Tennessee
Possum Hollow Nurseries	Philadelphia, Pennsylvania
Potter, The H. R., Nursery	Joelton, Tennessee
Pound Gulf Nursery	McMinnville, Tennessee
Prairie & Southwestern Floretum	Fall River, Kansas
Quaker Hill, Inc.	Newark, New York
Quaker Hill, Inc.	Tyler, Texas
Rainbow Hybridizing Gardens	Placerville, California
Ramsey, Fred	Harrison, Tennessee
Ramsey, J. A., & Son	Harrison, Tennessee
Ramsey, J. L.	Harrison, Tennessee
Ramsey, Luther	Harrison, Tennessee
Ramsey, Tom	Harrison, Tennessee
Reed, M. H., Seed Company	Marietta, Kansas
Reliance Rose Nurseries	Tyler, Texas
Rhea Floral Company	Greenville, Tennessee
Riegel Plant Company	Experiment, Georgia
Rivermont Orchids	Signal Mountain, Tennessee
Riverside Nursery Company	McMinnville, Tennessee
Riverside Nursery	Winchester, Tennessee
Roberts Strawberry Nursery	Kalamazoo, Michigan
Rockmont Nursery	Boulder, Colorado
Rocknoll Nursery	Morrow, Ohio
Roller's Nursery	Rogers, Arkansas
Romacres, H. B.	Liberty Center, Ohio
Rose City Nursery	Tyler, Texas
Howard Rose Company	Hemet, California
Rosedale Nurseries	Monrovia, California
Rose Hill Seed & Nursery	Panora, Iowa
Rosemont Nurseries	Tyler, Texas
Russell Gardens	Spring, Texas
Rynalski, K. F., Nursery	Fredonia, New York
Sanders Nursery	McMinnville, Tennessee
Savage Farms Nursery	McMinnville, Tennessee
Scarff's, W. N., & Sons	New Carlisle, Ohio
Schifferli, F. E. & Son, Nurseries	Fredonia, New York
Schmidt's Flowers	Youngstown, Ohio
Schwab Fruit Farm & Nursery	Mankato, Minnesota
Scruggs Nursery	McMinnville, Tennessee
Sea Island Nursery	St. Simons Island, Georgia
Sea Island Nursery	Sea Island, Georgia
Sears, Roebuck & Company	Shelbyville, Delaware
Semmes Nursery	Semmes, Alabama
Sexton Plant Company	Tyler, Texas
Shadow Nursery Company	Winchester, Tennessee
Shady Lane Nursery Company	Smithville, Tennessee
Shahan Nurseries	Tullahoma, Tennessee
Shenandoah Nurseries	Sheanadoah, Iowa
Shenstone Farm Nursery	Sharonville, Ohio
Siebenthaler Company	Dayton, Ohio
Simpson Nursery Company	Monticello, Florida
Sinclair Nursery	Dayton, Tennessee
Sisk Nurseries	Winchester, Tennessee
Slatton Nursery Company	McMinnville, Tennessee
Smith Bros. Nursery Company	Concord, Georgia
Smith Bros. Nursery Company	Rock Island, Tennessee
Smith, W. T., Corp.	Geneva, New York
Southern Nursery & Landscape Company	Winchester, Tennessee
Southern State Nurseries	McClenny, Florida
Southland Nurseries, Inc.	Mobile, Alabama
Southland Rose Nurseries	Tyler, Texas

South Side Nursery & Orchard Company	Smithville, Tennessee
Springbrook Gardens	Mentor, Ohio
Spring City Nurseries	Huntsville, Alabama
Springdale Farms	Portland, Tennessee
Spring Hill Nurseries Company	Tipp City, Ohio
Springtime Bulb Farms, Inc.	Lebanon, Ohio
Standard Nursery Company	McMinnville, Tennessee
Stark Bros. Nurseries & Orchards Company	Louisiana, Missouri
Stern's Nurseries	Geneva, New York
Stevenson & Cox	Perry, Ohio
Stewart, H. H. & Son's Nursery Company, Inc.	Smithville, Tennessee
Striblings Nurseries	Merced, California
Stuart, C. W. & Company	Newark, New York
Stumpp & Walters Company	New York, New York
Studley, Walter A., Company	Fennville, Michigan
Summerville Floral Nursery	Summerville, South Carolina
Suncrest Evergreen Nurseries	Johnstown, Pennsylvania
Sunny Ridge Nursery	Round Hill, Virginia
Tailsman Nurseries	Tyler, Texas
Tarlton Nurseries	McMinnville, Tennessee
Tegelaar Bulb Farms, Inc.	Babylon, New York
Tennessee Nursery Company	Cleveland, Tennessee
Tennessee Valley Authority	Clinton, Tennessee
Tennessee Valley Nursery	Winchester, Tennessee
Terrell, Mrs. Roy	Greenville, Georgia
Texas Nursery Company	Sherman, Texas
Thompson & Fletcher	Hughes, North Carolina
Thompson Nurseries	Spring City, Tennessee
Tibbs, C. V., Nursery Service	Nashville, Tennessee
Totty's Nursery	Madison, New Jersey
Townsend Nurseries	Salisbury, Maryland
Tri-State Nurseries	Ironton, Ohio
Trobaugh, Mrs. E. M.	Morristown, Tennessee
Tropical Plant & Flower Company	Sarasota, Florida
Truitt Nursery	Montgomery, Alabama
TVA Muscle Shoals Forest Nursery	Wilson Dam, Alabama
Underhill's Nurseries	McMinnville, Tennessee
Universal Bulb Corp.	Yonkers, New York
Upton Nursery Company	Goodrich, Michigan
Ustler Bros.	Apopka, Florida
Valentine Nurseries	Cosby, Tennessee
Van Zanten Bros.	Montclair, New Jersey
Vanderpool's Nursery Company	Smithville, Tennessee
Vaughn Nursery	Smithville, Tennessee
Vaughn's Seed Company	Chicago, Illinois
Verner, Barron, Nursery	Tyler, Texas
Verhalen Nursery Company	Scottsville, Texas
Verney Nursery Company	Tyler, Texas
Victory Nursery	Baileyton, Alabama
Volk, William F.	Browns Mills, New Jersey
Waddell, J. A.	Birchwood, Tennessee
Wagner, J. W., Nursery	Signal Mountain, Tennessee
Wake Forest Nurseries	Smithville, Tennessee
Walnut Grove Nursery Company	McMinnville, Tennessee
Watsoon's Pecanwood Nurseries	Orangeburg, South Carolina
Waxahachie Nursery	Waxahachie, Texas
Wayside Gardens Company	Mentor, Ohio
Wedge Nursery	Albert Lea, Minnesota
Weller Nurseries, Inc.	Holland, Michigan
Western Maine Forestry Nursery	Fryeburg, Maine
West Hill Nurseries	Fredonia, New York
Wewahitchka Nursery	Wewahitchka, Florida
Wharton Springs Nursery	Smithville, Tennessee

Whitten Nurseries	Bridgham, Michigan
Wight Nurseries	Cairo, Georgia
Wilcox, J. F. & Sons Florists, Inc.	Council Bluffs, Iowa
Williams, Isaac Langley	Exeter, New Hampshire
Williams Nursery	Liberty, Tennessee
Willis Nursery	Ottawa, Kansas
Wilson, C. E., Nurseries	Jacksonville, Texas
Wilson County Nursery Company	Martha, Tennessee
Wilson & Sons Nursery Company	Winnsboro, Texas
Wilson, V. W.	Savannah, Georgia
Wilson, W. R., Nursery	Tyler, Texas
Winter Greenhouses	Perry, Ohio
Wood-Howell Nurseries	Bristol, Virginia
Yoder Brothers, Inc.	Barberton, Ohio
Young Bros. Nursery Company	Smithville, Tennessee

AGENTS OF NONRESIDENT NURSERYMEN

Aaron, Ira	Louisville, Kentucky
Ahart, Henry L.	Mayfield, Kentucky
Barnes, Bruce	Cincinnati, Ohio
Berkley, Alfred T.	Mayfield, Kentucky
Bing, W. H., Jr.	Smithville, Tennessee
Bodde, Edward H., Jr.	Ft. Thomas, Kentucky
Bricka, Alfred M.	Cincinnati, Ohio
Brown, Thomas	Independence, Kentucky
Cardwell, Lewis	Louisville, Kentucky
Carlisle, Van	Louisville, Kentucky
Chard, Howard S.	Columbus, Ohio
Christian, Louis R.	Joelton, Tennessee
Clark, James H.	Hickman, Kentucky
Constable, A. W.	Blanchester, Ohio
Cummings, A. A.	Evansville, Indiana
Deverick, Alta R.	Louisville, Kentucky
Duvall, Claude M.	Evansville, Indiana
Edmond, Loren A.	Evansville, Indiana
Fathera, W. H.	Murfreesboro, Tennessee
Faucette, Chesley Morton	Louisville, Kentucky
Ferguson, Donald	Cincinnati, Ohio
Fisher, Curtis	Louisville, Kentucky
Fleming, J. H.	Virgie, Kentucky
Franklin, Jack I.	Sellersburg, Indiana
Fuston, B. A.	Smithville, Tennessee
Fuston, Esdel	Liberty, Tennessee
Fuston, Floyd	McMinnville, Tennessee
Fuston, Hoyt	Liberty, Tennessee
Fuston, Odell	McMinnville, Tennessee
Fuston, O. D.	McMinnville, Tennessee
Fuston, S. D.	Murfreesboro, Tennessee
Fuston, V. R.	Liberty, Tennessee
Fuston, W. H.	McMinnville, Tennessee
George, John E.	Portsmouth, Ohio
Gram, Henry H.	Washington Court House, Ohio
Haley, R. E.	McMinnville, Tennessee
Hamilton, Robert H.	Newark, New York
Hickerson, A. D.	Nashville, Tennessee
Hillis, B. H.	McMinnville, Tennessee
Hillis, J. J.	McMinnville, Tennessee
Irby, Raymond F.	Louisville, Kentucky
Jackson, Haynie H.	Louisville, Kentucky
Jean, Robert A.	Elberfeld, Indiana

Kavanaugh, Thomas E.	Rossmoyne, Ohio
Keasler, J. M.	Poplar Bluff, Missouri
Martin, O. W.	McMinnville, Tennessee
McAdams, Eugene P.	Louisville, Kentucky
McGrath, Edward M.	Louisville, Kentucky
McIlrath, Mrs. Bertha	Petersburg, Indiana
McKnight, O. P.	Murfreesboro, Tennessee
Mershon, Herbert	Portsmouth, Ohio
Milligan, L. L.	Gassaway, Tennessee
Nippert, Kerklas O.	Raceland, Kentucky
Overman, Walter G.	Cincinnati, Ohio
Potter, K. B.	Joelton, Tennessee
Priest, John R.	Calhoun, Kentucky
Richardson, George L.	Louisville, Kentucky
Ridgeway, T. M.	Mounds, Illinois
Robinson, Erbie	Sparta, Tennessee
Rupp, Roy W.	Louisville, Kentucky
Santer, Jack T.	Evansville, Indiana
Sarver, B. J.	Wurland, Kentucky
Sisk, Robert J.	Nashville, Tennessee
Smith, A. B.	Smithville, Tennessee
Smith, Albert N.	Evansville, Indiana
Spencer, C. V.	Dowelltown, Tennessee
Spencer, R. E.	Liberty, Tennessee
Spencer, W. B.	McMinnville, Tennessee
Splain, Wm. R.	Cincinnati, Ohio
Stoneberger, Benjamin F.	Evansville, Indiana
Sweeney, J. M.	Louisville, Kentucky
Vail, Robert	Louisville, Kentucky
Van Benthuysen, H. L.	Canton, Ohio
Will, John A.	Evansville, Indiana
Wilmore, Julian H.	McMinnville, Tennessee
Winfrey, Solon	Hickman, Tennessee
Workman, Mrs. Sylvia J.	Russell, Kentucky