

## EXECUTIVE SUMMARY

National Plant Board

Plant Quarantine, Nursery Inspection, and Certification Guidelines

Agricultural agencies in the U.S. have been charged with a **pest prevention mission**: to protect agriculture, the environment and our citizens from the damaging effects of plant pests. Satisfying this mission while providing for equitable trade in both domestic and international markets is a major challenge.

The **ideal pest prevention system** is one that is mutually agreed upon and uniformly applied. It must effectively identify the damage potential of a pest and assess and manage pest risk. **Mutual agreement** among pest prevention agencies cannot be achieved unless each agency understands the functions, activities and tasks involved in identifying harm caused by pests and uses valid pest risk assessment and management procedures. **Uniformity** cannot be achieved unless guidelines are established, serving as standards against which pest prevention activities can be measured.

The existing array of international, federal and state plant pest and disease regulations varies considerably, giving rise to occasional disputes and charges of unfair trade practices. Current trends in government-related pest prevention now call for consistent, effective programs due to:

*more **state responsibility** in managing plant protection work;  
greater concern over **environmental impacts** of pesticide use;  
importance of pest prevention programs in furthering **exports**;  
frequent **violations** of existing quarantines; and  
industry **cost control methods**, such as just-in-time delivery.*

The **National Plant Board**, an organization comprised of the state plant pest regulatory agencies in the U.S. and the Commonwealth of Puerto Rico, consistent with its organization purpose, has adopted guidelines to assist states in meeting their plant quarantine and inspection needs. Five major concepts are addressed in these **Guidelines**.

### **1. Quarantine actions should be used only on quarantine pests.**

**Quarantine pests** are pests of economic concern that do not occur in a specified geographic area, or that are being officially controlled in that area. Determining whether a particular pest is of quarantine significance requires that a pest risk analysis be performed to identify the kind of damage, or harm, the pest could cause and the likelihood that harm could occur. The Guidelines set forth mechanisms allowing pest prevention agencies to identify quarantine pests and select measures to reduce pest risk to acceptable levels.

### **2. States may regulate non-quarantine pests.**

The quality of various commodities can be seriously affected by the presence of pests or by the damage they cause. Therefore, apart from quarantine restrictions, states may regulate commodity

quality with respect to “**quality pests**” (non-quarantine pests). Nursery stock pest freedom requirements placed by states are one regulatory example.

### 3. Importing states establish commodity entry standards.

This concept is consistent with that used by countries throughout the world as they determine entry requirements for plant material and other commodities. The Guidelines will allow states to **protect their natural and cultivated plant resources from pests**, while pursuing regional and national consistency to ensure orderly commerce.

### 4. Phytosanitary and Nursery Stock Certificates serve different purposes.

**Phytosanitary certificates** are issued by duly authorized officials to affirm, declare or verify that a shipment of regulated commodities complies with quarantine requirements. **Nursery stock certificates** serve a similar purpose, but only with regard to state pest freedom standards for non-quarantine “quality pests.” The Guidelines will assist states in assuring that the certificates issued are appropriate, valid and reliable.

### 5. Pre-clearance and origin inspection programs should be fostered.

The Guidelines encourage cooperative interstate programs that provide inspection and **clearance of regulated commodities at origin**. These programs reduce destination inspection workload, reduce delivery delays, and facilitate orderly trade and marketing.

The National Plant Board Guidelines are yet another step toward the common goal of harmony and uniformity in the field of plant pest regulation. They will enable plant protection agencies in the U.S. to protect agriculture, the environment and the public against damaging pests while offering industry continued opportunities for equitable trade.

Each state is urged to review its quarantine and nursery inspection programs, measure them against the Guidelines yardstick, and modify those programs where necessary. Some states plan to include industry in this review process. As the Guideline concepts are implemented, states and industry will enjoy the benefits of uniform regulation.

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## INTRODUCTION

In 1992, the National Plant Board (NPB) recognized the need to promote and foster greater harmony among pest prevention programs administered by federal, state and local agencies. Consequently, a Quarantine and Nursery Standards Committee (QNSC) was appointed in 1993 to undertake the task of addressing specific pest prevention problems and issues. These National Plant Board Plant Quarantine and Nursery Inspection Guidelines are the product of the QNSC’s dedicated efforts. A first draft was presented to the regional plant boards and their respective state memberships in the spring of 1994. That draft also was discussed at the NPB’s 1994 annual meeting in Chicago, Illinois. The QNSC used the comments and suggestions received to develop a second draft for 1995 review by the states and regional plant boards. Minor revision based on the further comments and suggestions in 1995 yielded a final document adopted by the NPB at its August 13-16, 1995 annual meeting in San Diego, California.

It has been said that “98 percent of a good idea is dedication to execution.” If that statement is correct—and the current officers of the NPB believe that it is—adoption is only a small part of the overall effort! This by no means suggests that the work of the QNSC is a minor contribution to the overall project.

Stephen V. Johnson (Chairman), Tom Kowalski (Vice-Chairman), Ann Gibbs (Chairperson, Eastern Plant Board), Tom Sim (Chairperson, Central Plant Board), Tad Hardy (Chairperson, Southern Plant Board), Bill L. Callison (Chairperson, Western Plant Board), and Craig Regelbrugge (American Association of Nurserymen) are highly commended for their hard work and dedication. Regionally, these people, who lightheartedly called themselves the “gang of seven,” served as the working committee; but, they consulted with other regional Committee members during the course of their work. The complete membership of the QNSC is shown on page viii.

So, what follows NPB adoption of these guidelines? These guidelines now must be communicated to all interested and affected plant protection agencies. Therefore, we will distribute these Guidelines to the National Association of State Departments of Agriculture (NASDA) with a cover letter suggesting review and support for implementation among all the states.

The Guidelines also will be sent to the U.S. Department of Agriculture and to the North American Plant Protection Organization (NAPPO) for distribution to the appropriate officials in Canada and Mexico.

Most important, the program managers and staffs of each of the plant regulatory departments must receive, study, and understand the Guidelines. Using a “train-the-trainers” approach, it is suggested that each regional plant board include a one-day training session for their 1996 annual meetings. These training sessions should be led by the QNSC members who represent the regions on the Committee. The QNSC itself is asked to prepare a question and answer (Q & A) brief covering the key issues that are likely to be raised and to explore the feasibility of preparing a training video that state program managers could use as needed to help accomplish the required training for their staffs.

Pest prevention agencies in the United States should all give careful consideration to these Guidelines. Quarantine and nursery programs should be reviewed, evaluated, and revised for conformance with the guidelines; and, all future pest prevention activities should be developed in harmony with them. If this is done, greater consistency, fewer disagreements, and more efficient and effective protection for agriculture, the environment, and the public will be the satisfying and rewarding results.

August, 1995

Isi A. Siddiqui, Chairman, National Plant Board

Howard Singletary, Vice-Chairman

Stephen V. Johnson, Secretary-Treasurer

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## PURPOSE

The pest prevention mission of public agricultural agencies in the United States is to protect agriculture, the environment, and citizens from the economic and environmental harm that injurious plant pests can cause.

Satisfying this mission while, at the same time, providing for equitable and orderly domestic and international trade, is a major challenge. The ideal pest prevention system is one that is mutually agreed to and uniformly applied. The system must efficiently and effectively:

Identify pest harm;

Assess pest risk; and

Manage pest risk.

**Mutual agreement** among pest prevention officials cannot be achieved unless all know and understand the functions, activities and tasks involved in pest harm identification, risk assessment, and risk management. **Uniformity** cannot be achieved if there are no mutually agreed upon guidelines that serve as a standard against which various systems and actions can be measured and readjusted as needed.

The current array of international, federal and state plant pest and disease regulatory requirements vary considerably, giving rise to occasional disputes and charges of unfair trade practices. In addition to the inconsistency problem, a number of other trends create a need to increase the consistency and effectiveness of public agency pest prevention programs:

Increasingly, the responsibility of implementing and managing inspection, certification and quarantine programs falls completely, or at least partly, on the states;

Certain marketplace trends are impacting the effectiveness of plant health programs. For example, in the past most orders were placed well in advance of delivery, and vendor-buyer relationships were generally more stable. Presently, the marketplace often demands delivery on short notice. "Just-in-time" inventory practices result in more frequent small deliveries. Sales may be arranged by brokers who may never take possession of the product. Such trends place a greater strain and level of expectation on federal, state and local regulatory programs;

Increasing awareness and concern about the adverse environmental impacts of injurious pests are resulting in a higher level of expectation for plant regulatory programs;

Area-wide IPM approaches and pest-free areas to facilitate exports are becoming more important to international commerce;

Breaches of federal and state plant health requirements underscore the need to achieve greater consistency and effectiveness among state programs.

These guidelines were developed to address a number of specific and interrelated charges as follows:

1. Define the process of risk analysis to ensure valid quarantines.

2. Develop a model plant pest quarantine (including the basic elements necessary for an effective quarantine).
3. Categorize plant pests of regulatory concern. Thresholds should be established on certain plant pests.
4. Develop a list of plant pests for the United States including quarantine pests, pests of regulatory concern, and pests of consumer protection concern.
5. Develop a model plant pest law to help standardize the nursery stock certification process.
6. Standardize nursery inspections while developing a model for the certification of nursery stock shipped out-of-state and for virus indexing and special certification of nursery stock.
7. Standardize shipping regulations including labeling, origin of nursery stock, treatments, and quarantine compliance.
8. Identify basic (minimum) information to be included on license or permit applications for nursery growers and dealers.
9. Standardize nursery directories published by various states.
10. Develop an arbitration system for quarantine and nursery stock violations/rejections that ties-in to the nursery standards and definitions of plant pests.
11. Develop minimum standards for inspectors.
12. Compile a list of literature, research, and technical support resources (references) on plant pests.
13. Establish crop codes and/or situation growing codes.
14. Work with CAPS and NAPIS to ensure that data on pests of regulatory concern are current and contained in the NAPIS database.

Charges 1-3 and 5-11 are addressed in these NPB Plant Quarantine and Nursery Inspection Guidelines. Charge number 4 regarding a list of plant pests of regulatory concern is highly specific to the individual states. A pest of no quarantine concern in one state can be a quarantine pest for another. Thus, the quarantine summary compiled by the American Association of Nurserymen might well be the closest that regulatory agencies can come to preparing and distributing a list of quarantine pests. However, the pest risk analysis section of these Guidelines does provide a clear basis for identifying quarantine pests and for mitigating the associated risk. In the long run, this is far more important and valuable than establishing a quarantine pest list.

Charge number 12 is not addressed by these Guidelines. The current QNSC membership believes that accomplishment of this task might not be feasible. Charge number 13 seems to be directed most at determining the true origin of plant shipments. In this regard, the charge is partially addressed via the guidelines provided for nursery stock certificate numbering. Certificate numbers should be the shipper's license or permit number or some other number that definitely identifies the shipper. Charge number 14, while not addressed in these guidelines, has been addressed in that

NAPIS has been directed to focus on maintaining pest distribution records needed for quarantine evaluations and phytosanitary certification.

In summary, these Guidelines fulfill the charges given to the National Plant Board's Quarantine and Nursery Standards Committee. More importantly, these Guidelines serve the broad or general purpose of enabling pest prevention agencies in the United States to protect agriculture, the environment, and the public against the economic and environmental harm that injurious plant pests can cause while still providing for equitable and orderly trade.

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NATIONAL PLANT BOARD  
QUARANTINE AND NURSERY STANDARDS COMMITTEE (QNSC)

**CHAIRMAN**

**Stephen V. Johnson**

Bureau of Plant Industry  
Nebraska Department of Agriculture  
P.O. Box 94756  
Lincoln, NE 68509-4756

**EASTERN PLANT BOARD**

**Ann Gibbs (Chairperson)**

Division of Plant Industry  
Maine Department of Agriculture  
Augusta, ME 04333 Carol Lemmon  
Connecticut Ag. Experiment Station  
P.O. Box 1106  
New Haven, CT 06504-1106

**SOUTHERN PLANT BOARD**

**Tad Hardy (Chairman)**

Louisiana Department of Agriculture and  
Forestry  
P.O. Box 3118, Capitol Station  
Baton Rouge, LA 70821-3118 Richard  
Gaskalla  
Division of Plant Industry  
Florida Department of Agriculture  
P.O. Box 147100  
Gainesville, FL 32614-7100

**AMERICAN ASSOCIATION OF  
NURSERYMEN**

**Craig Regelbrugge**

Director of Regulatory Affairs  
American Association of Nurserymen  
1250 I Street, NW, Suite 500 Room 202,  
Washington, DC 20005-3994

**VICE-CHAIRMAN**

**Tom Kowalski**

Plant Protection Division  
Georgia Department of Agriculture  
Agriculture Building, Capitol Square  
Atlanta, GA 30334

**CENTRAL PLANT BOARD**

**Tom Sim (Chairman)**

Plant Protection Section  
Plant Health Division  
Station House, Station 28 Kansas Department of  
Agriculture  
901 S. Kansas Avenue  
Topeka, KS 66612-1281 John Haanstad  
Iowa Department of Agriculture  
1st Floor, Wallace Building  
Des Moines, IA 50319

**WESTERN PLANT BOARD**

**Bill L. Callison (Chairman)**

Division of Plant Industry  
California Department of Food and Agriculture  
P.O. Box 942871  
Sacramento, CA 94271-0001 Bill Wright  
Plant Division  
Oregon Department of Agriculture  
635 Capitol Street, N.E.  
Salem, OR 97310-0110

Ken MacLeod

Plant Health

AgCanada

620 Royal Avenue

P.O. 2523

New Westminster, British Columbia

Canada, V3L 5A8

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NATIONAL PLANT BOARD  
PLANT QUARANTINE AND NURSERY INSPECTION GUIDELINES

## I. ROLE AND POLICY

### A. Role

These guidelines have been developed and adopted by the National Plant Board for use by federal, state, and local plant protection officials to:

1. Facilitate and govern the identification of quarantine pests;
2. Identify pest harm;
3. Assess pest risk;
4. Identify pest risk mitigation methods;
5. Develop, implement, and manage pest risk mitigation strategies including quarantines, origin inspection, preclearance, pest-free areas, special permits, and compliance agreements;
6. Facilitate uniformity (in pest prevention among the states and local regulatory officials) and orderly marketing;
7. Provide a basis for pest prevention program review and evaluation; and
8. Present one approach to settling disputes over the propriety of pest risk mitigation strategies imposed by state and local regulatory officials.

### B. Policy

It is the policy of the National Plant Board (NPB) that:

1. These guidelines shall be distributed to all agencies in the United States responsible for plant quarantine and nursery inspection, for the purposes of:
  - a) Clarifying the elements of pest prevention ([Appendix A](#));
  - b) Bringing about an understanding and establishing the objectives of plant quarantine and nursery regulatory programs in the United States;
  - c) Identifying enforcement mechanisms, and their purposes and uses ([Appendix B](#));
  - d) Facilitating consistency of interpretation and application across organizational lines and over time; and
  - e) Serving as a framework for policy and law revisions that appear desirable on the basis of experience.
2. Each state plant pest prevention agency is responsible for providing copies of these guidelines to its staff, providing staff training, and following these guidelines.

## II. PEST RISK ANALYSIS AND MITIGATION\*

*\*Users of the guidelines are apprised that the North American Plant Protection Organization (NAPPO) has developed a standard for pest risk analysis. Those interested in the NAPPO document may contact Mr. Bruce E. Hopper, Executive Secretary, North American Plant Protection*

Organization, c/o Plant Protection Division, Agriculture Canada, 59 Camelot Drive, Nepean, Ontario, K1A 0Y9 Canada, Telephone (613) 952-8000.

**A. Definitions** – A critical task in pest risk analysis is quarantine pest identification. For the purposes of these guidelines “**quarantine pest**” means an economically important pest that does not occur in an endangered area, or which is being officially controlled in an endangered area, and for which economic impact cannot be reduced to an acceptable level by means or methods other than phytosanitary measures.\*\*

*\*\*[For comparison, consider the North American Plant Protection Organization (NAPPO) definition: “a pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled.”]*

To be completely meaningful and useful, the NPB definition of “quarantine pest” must be elaborated by defining the various terms contained within it. The key terms are defined as follows:

1. “**Pest**” means any biotic agent (any living agent capable of reproducing itself) or any of the following that is known to cause damage or harm to agriculture or the environment:

- a) Any infectious, transmissible, or contagious disease of any plant; or any disorder of any plant which manifests symptoms or behavior which, after investigation and hearing, is found and determined by a duly constituted federal, state, or local pest prevention agency, to be characteristic of an infectious, transmissible, or contagious disease.
- b) Any form of animal life.
- c) Any form of vegetable life.

2. “**Plant**” includes any part of a plant, tree, plant product, shrub, vine, fruit, vegetable, seed, bulb, stolon, tuber, corm, pip, cutting, scion, bud, graft, or fruit pit.

3. “**Does not occur**” means that a valid detection survey has been conducted and the pest was not found; or, that any previous occurrences of the pest in the area were eradicated or otherwise eliminated. Pests known to be widespread or cosmopolitan in areas adjacent to the area of concern are presumed to be present in the endangered area unless definitely demonstrated to be absent. (See [Appendix D](#) for pest surveillance, pest survey, and pest rating guidelines.)

4. “**Valid detection survey**” means an official systematic search for a target pest that is performed using methods mutually acceptable between trading partners. (See “Detection” and “Survey” in [Appendix C](#)).

5. “**Endangered area**” means continent, region, country, state, county, province, municipality or any other discretely delineated political or otherwise lawfully constituted geographic area which has been officially identified for protection from injurious pests not already present.

6. “**Officially controlled**” means the conduct, by an official public pest prevention agency, of eradication or intensive suppression activity including various treatments, quarantine and other measures with the goal of eliminating an isolated infestation or prevention of further spread within the endangered area. It does not include general agricultural, urban forestry, or home garden pest control measures conducted by individuals against pests permanently established in the endangered area.

7. **“Economic impacts”** means significant damage or harm clearly identified in a formal pest risk analysis, in terms of:

- plant or crop destruction or injury;
- increased cultural or pest control costs;
- disruption of existing pest control strategies such as biological control, integrated pest management, sustainable agriculture or forestry, and cropping patterns or loss of a high value crop without replacement by an equally valuable and marketable crop;
- social adversities such as interference with home/urban gardening, human health, worker safety, food safety, or jobs; or
- environmental quality including added pesticide use, scenic and watershed damage, destruction of ecosystems, and food chain interference.

8. **“Significant damage or harm”** means that level of adverse impact that results in economic damage, injury or loss that exceeds the cost of control for a particular crop.

9. **“Acceptable level”** means the probable level of harm that is so low that the imposition of phytosanitary requirements is not required; or the probable level of harm that the trade partners agree to achieve through the imposition of pest risk mitigation measures or strategies and accept for continued trade when confirmed by phytosanitary certification of specified host commodities.

10. **“Phytosanitary measures”** includes growing season treatments, methods of production/processing or inspection, and post-harvest treatments specified (in formally adopted quarantines) as requirements to assure that the pest risk associated with shipments of host commodities is mitigated to an acceptable level.

11. **“Methods other than phytosanitary measures”** include plant registration and certification programs, nursery stock and other commodity pest freedom standards, special permits, compliance agreements, etc. These methods might provide an acceptable level of phytosanitary security for moderate to low impact quarantine pests.

12. **“Pest free area”** means an area kept free from a specific pest.\*

*\*The NAPPO definition is “an officially identified area in which a target pest does not occur and is maintained as such.” The proposed Food and Agricultural Organization definition is “an area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is officially maintained.”*

13. **“Area”** means any political division or subdivision or any officially defined area including adjacent parts of contiguous political divisions or subdivisions. [Political divisions include nations and states or provinces within them. Political subdivisions include counties, parishes or municipios (in Mexico), and cities or municipalities. Officially defined areas also may include any other clearly defined and identifiable area including a specific property or facility.]

14. **“Free from”** means that a valid detection survey has been performed showing that a specific pest is not present.

**A complete list of the terms used in these Guidelines, together with their definitions, is included as [Appendix C](#).**

## B. PEST RISK ANALYSIS (See [Figure – 1](#))

**1. Pest Harm Identification** – *Is the agent a pest?* What is its biological nature and can it cause agricultural or environmental damage and related adverse impacts? What is its relationship to plants and other biological entities? Does it cause significant harm or damage in places where it already exists? Is it being controlled there? How? For what purpose(s)?

**2. Impact Analysis** – *What is the severity of the harm?* Various combinations of high, moderate and low (host, host range, control, market, social and environmental) impacts will affect the overall outcome of the impact analysis as being high, moderate or low. (See [Figure – 2](#) and [Appendix E.](#))

**a. Host Impacts** — To what extent would hosts be injured (destroyed or debilitated to varying degrees)? Would the presence of the pest interfere with the establishment, normal growth and maintenance of new plantings? Would the presence of the pest worsen the impacts of other pests? Would the presence of the pest reduce the yield, quality, or shelf life of the affected crop(s)?

**b. Host Range Impacts** — How many different host/crops would be affected? What is the value or importance of these hosts/crops?

**c. Pest Control Impacts** — Can the pest be detected easily and reliably? Can the pest be eradicated with ease? If the pest were to be detected as a small established infestation in the area of concern, would it be eradicated or officially controlled? Can the pest be controlled with ease using available methods? Or, are costly growing season treatments required? Are post-harvest commodity treatments available? Are there natural enemies present in the area of concern or which could be introduced to effect acceptable control? Would required control treatments disrupt organic farming, integrated pest management, sustainable agriculture, or cropping patterns? Would some high value crops be lost?

**d. Market Impacts** — If the pest becomes established in the area of concern, would the desirable market characteristics of shape, color, size, overall appearance and shelf-life be adversely affected? Would quarantine restrictions be imposed by plant protection agencies in areas where the pest does not exist? Can phytosanitary requirements be met? At what cost? What will be the effect of quarantines on foreign and domestic markets? What will be the effect on agricultural profitability?

**e. Social Impacts** — Will lifestyles be altered (home gardening, outdoor food service/consumption, aesthetically appealing landscapes, etc.)? Will pest control efforts result in increased levels of pesticide in the environment? Will human health and food safety be compromised? If so, how? Will jobs be lost or gained?

**f. Environmental Impacts** — Will additional pesticides be added to the environment? Will forested areas be affected? Will there be adverse impact(s) on water resources, threatened and endangered species, native plants, or natural systems?

**3. Quarantine Pest Identification** (See [Figure – 3](#)) – The biotic agent is a quarantine pest if it:

is a pest,  
could cause significant harm,  
is likely to be moved artificially into or already exists in the endangered area and is being or would be officially controlled,  
could survive in the endangered area, and  
the risk could not be reduced to an acceptable level by means other than phytosanitary measures.

Is the biotic agent present in the endangered area? Has a survey been performed? Does the survey design provide a high level of confidence that negative results mean the biotic agent is not present? What do pest records show as to previous or current presence and distribution?

(If it does not exist in the endangered area, in the North American Plant Protection Organization (NAPPO) classification system it would be an A-1 quarantine pest. If it already exists in the endangered area *and* it is being officially controlled, it would be a NAPPO A-2 quarantine pest. If the biotic agent does not exist in the endangered area and would *not* be officially controlled, but its incidence would be regulated on nursery or other agricultural crops as a product quality or consumer protection concern, the biotic agent would be a NAPPO B-1 or “quality” pest. If the biotic agent does not exist in the endangered area and is of insignificant economic importance or would not be regulated, the biotic agent would be a NAPPO B-2, nonregulatory, or “non-actionable” pest. There are several existing pest rating systems and they often are not comparable. The USDA has one as described in [Appendix I](#) on pages 71 and 72. These guidelines advocate the system described in [Appendix D](#) which is based on distribution and economic importance.)

#### **4. Risk Assessment** (Determining the Probability of Harm)

Determining probability that harm, damage, or loss will occur is a prerequisite to the appropriate (and defensible) selection, implementation, and enforcement of effective mitigation measures, strategies, and regulatory mechanisms. Risk assessment involves identifying **predictable** danger of loss, injury, or harm. To what extent are agricultural and environmental interests and resources actually jeopardized or put into peril?

a. Could the biotic agent move from currently infested areas into the endangered area? How? — naturally or artificially? If natural spread from adjacent infested areas is imminent, quarantine measures are not justified. If artificially, what are the pathways and modes of movement? What is the likelihood of spread into the endangered area and within it after introduction, colonization and establishment?

b. Could the biotic agent survive in the endangered area? (Consider biological requirements in relation to climate, available hosts, human activities, microhabitats, etc.) If the biotic agent could survive, how, when, and where would it be likely to do so? Does it already exist in the area of concern? Is it being officially controlled?

#### **C. Pest Risk Mitigation Measures** (See [Figure – 1](#))

##### **1. Identification and Analysis**

a. What mitigation measures are available? (Prohibition of shipments from infested areas; growing season crop protection, cultural practices, or treatments; closed production facilities; post-harvest inspection and sorting; post-harvest heat or cold treatments; post-harvest chemical treatments; processing or special packaging, etc.)

b. Which of the available mitigation measures are most effective? Can they be used in combination to create an effective and feasible mitigation strategy? Are there methods or strategies that can be used without imposing a quarantine?

c. Are origin inspection, special permits, pest-free zones, pre-clearance and other such strategies feasible?

## 2. Selection, Implementation, and Monitoring (See [Figure – 4](#))

**a. Selection** – Certain of the risk mitigation measures alone might reduce the risk to an acceptable level. When that is the case, more than one might be selected for listing as alternatives to each other. For example, a formal **registration and certification program** or **growing season treatments** could be as effective as **post-harvest commodity treatments**. So one could be required or all three could be cited as equivalently acceptable alternatives.

In other cases, a combination of measures might be required in order to effectively address all the elements of risk. Various combinations might be required as an overall pest risk mitigation strategy. For example, growing season treatments and negative trapping together with post-harvest sorting and inspection requirements might achieve an acceptable level of risk.

When pests are not of quarantine significance but are still economically important, commodity standards for freedom may still be imposed. Among the reasons justifying standards is the fact that the feeding activities of certain insects (and other animal pests such as snails and slugs) and virus infections can disfigure or otherwise damage the appearance of plants in the marketplace and landscape plantings.

A number of virus pests are widespread and therefore not considered to be quarantine pests in the United States. However, they affect many plant species and are considered to be important commercially. Such viruses are controlled through nursery stock programs administered by governmental agencies or industry groups. Even when these programs are legally constituted and governmentally administered, participation normally is voluntary, and consumer demand governs the pest quality of the product the industry produces. Prunus necrotic ringspot is an example.

In any case, regulatory activity associated with established plant pest freedom standards must not be confused with quarantine or phytosanitary measures or their enforcement. In the case of commodity standards, tolerances are involved and shipments in violation should not be destroyed. At the discretion of receiving state officials, stock infested with pests at levels which exceed standards may be held off-sale until treated to bring them into compliance or rejected and returned out-of-state.

In the case of quarantine shipments, they are in violation if they are not properly identified or certified or if they are found to be infested with a quarantine pest. Quarantine enforcement options include returning the shipment to the shipper, destroying it, or (when feasible) treatment.

**b. Implementation** – If a high economic impact quarantine pest is involved and phytosanitary measures are selected, most governmental plant protection agencies will choose to implement them by imposing a quarantine which names the pest, infested areas subject to the quarantine, hosts regulated, and required treatments and certification. However, other mechanisms may be utilized. These are discussed in [Appendix B](#). They include compliance agreements, interagency agreements, interstate origin inspection/preclearance agreements, memoranda of understanding, permits, and policy, guidelines, and procedures.

As a matter of law, the implementation of a quarantine usually involves notification and hearing (or other opportunity for comment by affected entities) before the quarantine regulation or rule becomes effective.

In the United States, the National Plant Board has established a set of plant quarantine principles. The regional plant boards have participated in the development of those principles and agreed to

abide by them as a matter of policy. Noncompliance with these principles is a factor in determining the validity of any quarantine imposed.

After adoption of a quarantine, all interested and affected parties should be notified in writing at least 30 days before the effective date. In emergency situations, notice should be given quickly via fax, E-Mail, telephone, or other rapid communication technologies, followed by written notification.

**c. Monitoring** – An inspection or other monitoring system should be used to enforce and assure compliance with requirements. The system should include prompt notification to shippers when violations are discovered. Good monitoring and record-keeping enables planned periodic review and evaluation of the requirements to assure that requirements are 1) current, 2) revised and reissued as needed, and 3) still in compliance with the National Plant Board principles of plant quarantine and these Guidelines.

### III. PLANT QUARANTINE

#### A. Historical Background and Need

“Principles of Plant Quarantine” was adopted by the National Plant Board on July 25, 1931, and amended in 1936 (See [Appendix F](#)). In August 1969, that document was supplemented with a set of basic definitions and general guidelines to be considered in preparing quarantines and supporting documents, to promote greater uniformity of plant quarantine actions throughout the United States (See [Appendix G](#)). That supplement incorporated the explanatory notes originally adopted in 1931 and slightly revised in 1936.

In August 1972, the National Plant Board (NPB) adopted “Principles of Plant Pest Control” (See [Appendix H](#)). In March 1973, the United States Department of Agriculture’s Plant Protection and Quarantine (PPQ) program elaborated “Guidelines For Initiating And Discontinuing State-Federal Plant Protection Programs” (See [Appendix I](#)). Although they have not been adopted by the NPB, the PPQ “Guidelines” have served the national and regional plant boards, the states, and the United States Department of Agriculture well. They also have facilitated pest prevention work with Canada and Mexico.

Historically, plant pest and disease prevention and, more narrowly, plant quarantine have been relatively stable and new developments have been slow in coming. However, recently there have been many momentous changes including: a) the approval of the North American Free Trade Agreement (NAFTA) by Canada, Mexico and the United States; b) approval of the General Agreement on Trade and Tariffs (GATT) with its provisions for dealing with sanitary and phytosanitary measures (SPS); c) increased regional plant protection organization (RPPO) activity; d) establishment of the International Plant Protection Convention (IPPC) Secretariat in the Food and Agricultural Organization (FAO); and e) appointment of a FAO Ad Hoc Work Group for the Development of a Global System for National Plant Quarantine Importation Requirements. These changes require a more global perspective with emphasis on rapidly developing harmonization of definitions, pest risk analysis and management, and other elements of animal and plant disease prevention.

The GATT agreement recognizes, as international standards, the guidelines and recommendations for plant health developed under the auspices of the Secretariat of the IPPC in cooperation with the RPPOs operating within the framework of the IPPC. Similarly, the NAPPO is recognized in the NAFTA as the international body having responsibility for the establishment of phytosanitary standards for North America. Organizational and operational relationships are depicted in [Figure – 5](#).

## **B. Purpose and Role of Plant Quarantines**

### **1. Purpose**

Plant pest quarantines are imposed to prevent artificial introduction or to limit the spread of agricultural plant pests. Such quarantines may restrict the production, movement or existence of plants, plant products, animals, animal products, or any other articles or material, or activity of people which could result in the artificial introduction or spread of the specified pest(s).

### **2. Role**

A quarantine is a legal instrument duly imposed or enacted by a governmental agency as a means of mitigating pest risk. A quarantine enables enforcement of prohibitions, restrictions, treatment and certification requirements and other pest risk mitigation or management measures identified as being necessary to prevent the harm or damage that could result from the introduction and permanent establishment of an exotic pest in an endangered area.

## **C. Authority and Preemption**

Quarantines are seldom statutory in nature i.e., they are not enacted through the legislative and executive branches of government. Instead, a quarantine is usually in the form of administrative law duly authorized by statute and promulgated as rules or regulations pursuant to a procedure elaborated in statutory law. Any quarantine not promulgated on the basis of statutory authority is not legally binding and is subject to legal challenge and revocation.

It is generally accepted that federal quarantine law preempts state quarantine requirements. Similarly, local quarantine requirements are preempted by state quarantine requirements.

## **D. Principles of Plant Quarantine**

The principles of plant quarantine elaborated here are a concise restatement of the principles originally adopted by the NPB in the 1930's. The original principles are included in [Appendix F](#).

1. Inasmuch as the purpose of plant quarantines and the means required to achieve them cannot be undertaken by private individuals or groups, quarantines properly are the responsibility of government.
2. Quarantines shall not be imposed as trade barriers.
3. Quarantines will be established on the basis of the following:
  - a. As determined by a pest risk assessment, the plant pest targeted must pose an actual or anticipated threat to a substantial agricultural or environmental interest and/or the general public. However, the absence of complete biological knowledge of a pest will not necessarily prohibit the adoption of a quarantine.
  - b. No substitute or alternative mitigating action will accomplish the same pest prevention purpose.
  - c. Accomplishment of the stated purpose is a reasonable expectation.

d. Economic and/or environmental benefits outweigh the cost of administration and the costs to those who must comply with the restrictions imposed.

4. Regulations or rules establishing quarantines will be adopted with input from those interested in and affected by them. The United States Department of Agriculture (USDA) and the states are cooperating agencies which will be involved as appropriate. There also can be international considerations. When foreign trade is involved, states need to work with the USDA to determine which definitions and standards need to be met. Internationally, the IPPC may be involved. Regionally, the NAPPO or other RPPOs may be involved.

5. Quarantines will be as narrow in scope as possible while maximizing the potential for accomplishing their purpose.

a. Quarantines imposed in connection with plant pest eradication projects may be broader in scope and/or more restrictive because of the importance of the quarantined pest, the prognosis for its eradication or control, and its effects on the environment.

b. Quarantines imposed to prevent or slow the spread of established pests should be narrow in scope.

6. Quarantine areas should be as limited as possible and should be consistent with the area known to be infested. Whenever possible, boundaries shall be based upon existing state, county or township lines, major highways or roads, or geographic features such as rivers and mountain ranges.

7. Quarantines should be written as clearly and concisely as possible.

8. Adoption of a quarantine against a serious plant pest new to the endangered area will be accompanied by an information campaign. The scope and intensity of this campaign should be in proportion to the economic and/or environmental importance of the pest.

9. The scope of and restrictions imposed by a quarantine should be reduced or increased based on experience and information obtained in the administration of the quarantine.

10. Regulations establishing quarantines will be repealed when their purposes have been accomplished.

## **E. Model Quarantine Elements**

A quarantine consists of several essential elements each of which is identified and discussed here.

**1. Pest(s) Covered** – The pest(s) targeted for exclusion must be identified to assure that those who must comply with the quarantine know what is covered and to prevent circumvention and any caprice or arbitrariness in the administration of the quarantine.

**2. Area(s) Covered** – The area(s) covered, also known as the area(s) under quarantine, must be identified to enable all interested and affected parties to determine where the quarantine requirements or restrictions apply and where they do not. Areas covered must be consistent with:

- the known presence/absence of the pest(s);
- the biology of the pest(s) and its means of spread;
- geographic barriers; and
- identifiable infrastructure such as roads and highways, geographic features such as oceans and mountain ranges, and political subdivisions such as city limits, county or parish lines, and state and country borders.

**3. Hosts and Possible Carriers** (or Articles and Commodities Covered) – a list of prohibited or restricted regulated items.

**4. Definitions** – Any terms used that might not be readily understood should be clearly defined.

**5. Restrictions or Treatments Required** – Approved pest risk mitigation measures such as growing season inspection, trapping, treatments, or cultural practices and post-harvest inspection or commodity treatments must be identified together with what kind of supervision and documentation is required to assure compliance.

**6. Special Handling Requirements** – If special containers, packing, and shipment security methods are required, these should be specified.

**7. Identification** – If treatment or packing facility or other identification is required, it should be stated.

**8. Certification** – The kind and form of acceptable certification for treatment, handling, identification or origin must be specified. When origin certification is required for shipments produced, assembled or made in areas outside of the area(s) under quarantine, certifying officials must not certify materials that do not meet the commodity origin criteria discussed in the following section or which would reasonably be believed to result in the further spread of a quarantine pest.

## **F. Commodity Origin**

The issue of commodity origin is critical in the matter of quarantine certification. What is the true origin of a commodity? When does a quarantined product or commodity change its status as to origin? What factors should be considered?

Neither the mere relocation nor the passage of time change the pest risk associated with commodities from particular quarantine origins. Moving an infested commodity from an area under quarantine to one not under quarantine will only further the spread of pests to new areas. Furthermore, host commodities might become infested with additional quarantine pests while passing through or temporarily held in another area.

The real issue is the mitigation of pest risk to an acceptable level. Actions that might reduce pest risk to an acceptable level include:

1. Processing in a way that eliminates the pest and creates a new product.
2. Treatment that eliminates the pest followed by additional growth in a new area.
3. Growing through a climatic period or holding under conditions that would eliminate the pest.

Certifying officials are responsible for such determinations and must be committed to making them on the basis of preventing spread of quarantine pests to new locations identified for protection. This

means that officials must be alert to efforts to “launder” shipments by movement from a quarantine area through one that is not under quarantine. Requiring shippers to maintain records showing the source of all stock presented for phytosanitary certification is advised as one way of dealing with this problem.

## **G. Terminal Inspection**

Some states enforce their quarantine and nursery pest freedom standards by inspecting shipments as they arrive at various terminal points within the state. Terminal inspection points include bus, train, and truck terminals; express parcel carriers (e.g. Federal Express, United Parcel Services) terminals; grain elevators; florists and nurseries; land, sea, and air ports of arrival; and U.S. Postal Service post offices, and sectional or bulk mail centers.

To facilitate inspection activity, two states operate border agricultural inspection stations and have state statutes requiring that all shipments be held for inspection at time of arrival, and that inspection officials be notified of the arrival of all shipments. Express parcel carrier and U.S. Postal Service (USPS) operational problems associated with holding requirements include profiling packages (determining which ones contain plant materials), timely inspection, and legal constraints.

The profiling problem is mitigated to some degree by laws requiring that, at a minimum, parcels containing plant materials bear a label stating that the parcel contains plant materials, and giving the name and address of the shipper. However, the emphasis for express parcel carriers and the USPS is on prompt delivery. Therefore, little or no time is spent reading labels. Something is needed to facilitate the profiling (parcel sorting) process.

As a matter of uniformity, it is recommended that all states require **commercial** express parcel carrier and USPS plant materials shippers to label their packages in the following manner:

1. A red sticker be applied to parcels that contain plant material to signal that they must be held for agricultural inspection upon arrival. The wording, format and approximate size should be as follows:

**WARNING!  
PLANT MATERIAL**

**HOLD AT DESTINATION CENTER  
FOR AGRICULTURAL INSPECTOR**

2. A green and white sticker be applied to parcels that contain plant materials that have been precleared under the terms of preclearance or interstate origin inspection programs and that need not be inspected upon arrival at a carrier terminal or USPS post office or sectional or bulk mail center. The Green/White Interstate Origin Inspection/Preclearance Certificate format shown in [Appendix J](#) should be used.

3. A statement be applied to all parcels containing plant materials authorizing the opening and inspection of the contents. (This requirement is to facilitate inspection at USPS points of arrival. First class, Express, and Priority mail parcels are otherwise sealed against inspection and can only be detained upon probable cause and opened for inspection upon the issuance of a search warrant by a federal magistrate.) The recommended statement is: “May be Opened for Agricultural Inspection”.

The stickers and the statement in paragraph 3 should be placed in close proximity to the address on the parcel.

It is recommended that the foregoing requirements be effectuated through compliance agreements, interstate origin inspection agreements, preclearance permits, or memoranda of understanding. States with holding and terminal inspection requirements are expected to take the lead in working with their counterparts in other states and with the carriers to meet their specific holding and inspection needs.

## **H. Periodic Review and Evaluation**

Plant quarantines should be reviewed at least every five years to determine their continued need, validity, and cost-benefit. A new pest risk and risk mitigation analysis should be performed as outlined in these National Plant Board Guidelines. When need and validity issues are raised or complaints are filed by other pest prevention agencies, review and evaluation also will be required.

## **I. Inspector Qualifications**

Plant quarantine staff must be knowledgeable about the pest prevention system and committed to making it work in the best interests of all. A “qualified” quarantine inspector is one who does not require close supervision and who is authorized to issue quarantine and other certificates under his or her own signature. The following are **desirable** minimum qualifications:

- a. Education – Graduation from an accredited college or university with a degree in a biological science (alternatively including specialization in agronomy, biology, entomology, horticulture, plant pathology, or zoology); AND
- b. Experience – At least two years performing plant pest prevention work (alternatively including biological control, nursery inspection, quarantine inspection, pest management; or a combination thereof).

As a minimum requirement, inspectors should receive both classroom and on-the-job training. Some states have definite inspector education, experience, examination, and certification requirements. This is encouraged, as is continuing education.

## **J. Interstate Origin Inspection and Preclearance Programs**

Pest risk mitigation tactics or strategies can be enforced at the point of origin or at the point of arrival of the shipment. Enforcement at the point of origin can be more efficient and effective. It has the additional advantage of much more orderly marketing. Interstate origin inspection programs can be developed to achieve compliance with both quarantine and product quality standards. Interstate Origin Inspection is described in detail in [Appendix J](#).

## **K. Phytosanitary Certification**

Phytosanitary certification specifically relates to certification of compliance with the quarantine requirements of a foreign country or another state. The validity and reliability of phytosanitary certification is so critical that the National Plant Board has developed a standard for phytosanitary certification and included it as [Appendix K](#) in these Guidelines. The standard clarifies what phytosanitary certification is, why it is important, and what contributes to validity and reliability. Program administrators will want to make compliance with it a matter of agency policy.

## IV. NURSERY INSPECTION

### A. Definitions

The following definitions have particular application to nursery regulatory programs:

1. **“Agent”** means any person who on behalf of any other person receives on consignment, contracts for, or solicits for sale on commission, any plant product from a producer of such product, or who negotiates the consignment or purchase of any plant product on behalf of any other person.
2. **“Broker”** means any person who negotiates the purchase or sale of any plant product. A broker may not, however, handle either the plant product which is involved or the proceeds of a sale.
3. **“Commission merchant”** means any person, who:
  - a) Receives on consignment or solicits any plant product from a licensee or producer of the product.
  - b) Accepts any plant product in trust from the owner or the producer of the product for purposes of sale.
  - c) Sells any plant product on commission.
  - d) Handles any plant product in any way for the account of or as an agent of the consignor of the product. Any person who accepts a plant product from the producer of such product for the purpose of sale or resale is a commission merchant, unless the person has bought, or agreed to buy, the plant product by a contract which designates the price to be paid to the seller.
4. **“Consignee”** includes any person to whom any plant, nursery stock, horticultural product, agricultural commodity or farm product is shipped for handling, sale, resale, planting, or any other purpose.
5. **“Consignor”** includes any person who ships or delivers to any consignee any plant, nursery stock, horticultural product, agricultural commodity or farm product for handling, planting, sale, resale, planting or any other purpose.
6. **“Dealer”** means any person who obtains title to, or possession, control, or delivery of, any plant product from a producer at a designated price for the purpose of resale, or who buys or agrees to buy any plant product from a producer of the plant product at a designated price.
7. **“Horticultural product”** means those products stated in Group 18 of the United States Department of Labor Standard Industrial Classification Manual which are grown under cover or outdoors, including bulbs, flowers, shrubbery, florist greens, fruit stock, floral products, nursery stock,

ornamental plants, potted plants, roses, seed, sod, Christmas trees, fruits, food crops grown in greenhouses, vegetables, and horticultural specialties not otherwise specified.

8. “**Noxious weed**” means any species of plant which is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, is difficult to control or eradicate, and which a plant protection agency designates by law to be a noxious weed.

9. “**Nursery**” means any location where nursery stock is grown, propagated, stored, or sold; or any location from which nursery stock is distributed direct to a customer.

10. “**Nursery Stock**” means any plant for planting, propagation, or ornamentation.

11. “**Person**” includes individual, firm, corporation, company, or association.

12. “**Pest**” means any biotic agent (any living agent capable of reproducing itself) or any of the following that is known to cause damage or harm to agriculture or the environment:

– Any infectious, transmissible, or contagious disease of any plant; or any disorder of any plant which manifests symptoms or behavior which, after investigation and hearing, is found and determined by a duly constituted federal, state or local pest prevention agency, to be characteristic of an infectious, transmissible, or contagious disease.

– Any form of animal life.

– Any form of vegetable life.

13. “**Plant**” includes any part of a plant, tree, plant product, shrub, vine, fruit, vegetable, seed, bulb, stolon, tuber, corm, pip, cutting, scion, bud, graft, or fruit pit.

14. “**Sell**” includes offer for sale, expose for sale, possess for sale, exchange, barter, or trade.

15. “**Shipment**” means any article or thing which is, may be, or has been transported from one place to another.

A complete list of the terms used in these Guidelines, together with their definitions, is included as [Appendix C](#).

## B. Purpose

Nursery inspection programs, alone, can seldom be relied upon to provide quarantine security. For a detailed discussion of why this is so, readers are directed to [Appendix K](#) entitled “Nursery Stock Certification: Its Role and Limitations.” The basic purpose of nursery inspection programs is to assure compliance with standards of pest freedom for quality pests. The key to making nursery stock certificates meaningful and achieving uniformity among the states is establishing a national standard. And that standard should emphasize orderly marketing and consumer protection, and not exotic pest prevention. Quarantine (exotic) pest prevention must be dealt with separately via quarantine requirements and in close coordination with nursery inspection programs. However, before promulgating a quarantine, pest prevention agencies should consider whether establishing a nursery stock quality standard would be adequate for mitigating the risk associated with quarantine pests that are of moderate to low impact (See [Appendix E](#)).

## C. Model Nursery Inspection Program

All nursery inspection programs should be legally authorized and their requirements should be established by law. Most states have statutory authority to establish nursery inspection and other requirements by rule or regulation. Typically, rules or regulations are administrative law as opposed to statutory law which is passed by a state legislative body and approved by the governor.

Unlawful activities (i.e., those subject to legal remedies including prosecution, incarceration, fines or civil penalties) should be statutory while administrative remedies (such as license suspensions and revocations; holding plant material off sale; authorization, and suspension and revocation of nursery stock certificates) should be in the form of rules or regulations.

Every nursery inspection program should include the following elements.

**1. Definitions** – Pertinent definitions from the National Plant Board’s Plant Quarantine and Nursery Inspection Guidelines should be incorporated into any set of nursery inspection statutes, regulations or rules.

**2. Pest Control** – Shipping nurseries should be required to have a pest control program in effect that will assure consistent compliance with pest freedom standards (See page 21). Other good nursery practices are described in [Appendix L](#).

**3. Inspection Requirements** – At least one visual inspection should be made each year of all the nursery stock being grown by a shipping nursery. All inspections should be documented and kept on file for at least three years. The frequency and manner of inspection of nursery stock at retail nursery establishments should be at the discretion of state regulatory nursery officials.

Nursery stock not in compliance with pest freedom standards should be identified as part of the nursery inspection record, and sale of nursery stock not in compliance should be prohibited.

Ideally, nursery stock brought into the nursery should be held and inspected upon arrival. If the stock does not meet quarantine requirements, a quarantine rejection notice should be issued alternatively specifying return out-of-state, destruction, or treatment to eliminate the pest (if feasible). Copies of the quarantine rejection notice should be sent to the shipper (consignor) and the origin state regulatory agency. If the stock does not meet nursery stock pest freedom standards, a nursery stock notice of violation or noncompliance should be issued and sale of the stock should not be allowed until it is brought into compliance with the state’s pest freedom standards.

### 4. Pest Freedom Standards

All determinations of compliance should be based on visual inspection.

**For Surface Pests** – Surface pests include aphids, ants, mealybugs, mites, scales, snails and other invertebrate pests, and weeds in containers.

– “Effective Control” — Common (non-quarantine) pests generally distributed within the state should be kept under “effective control” which means that no more than a few individuals of any specific pest are found on no more than a few plants in the block or lot of nursery stock being inspected.

– “Free From” — “Free From” means that no plants are infested with any individual specimen of a pest. This standard applies to two categories of pests based on distribution:

- 1) Pests of limited distribution, where limited distribution means that only a few localized infestations exist in the state.
- 2) Pests not known to occur within the state.

**For Unhealthy Plants** – Weak plants or plants showing disease symptoms may be subjected to laboratory testing to determine the cause, and should be removed and destroyed unless curative treatment is applied.

Sale of nursery stock that does not comply with the foregoing standards should be prohibited. Infested nursery stock should be isolated to prevent pest spread to other stock, treated (where feasible), or destroyed. Follow-up inspection should be made to ensure that no other hosts are infested.

**5. Other Standards** – Other standards or requirements may be established for quality, labeling, grades, and advertising. In the interest of maintaining national consistency, the following documents should be reviewed for acceptability, and may be incorporated in such standards by reference:

American Standard for Nursery Stock (ANSI Z60.1) is a nationally-recognized, standardized system for sizing and describing plants. It was established to facilitate orderly trade in nursery stock.

Guides for the Nursery Industry, adopted by the Federal Trade Commission, are designed to foster and promote fair and competitive conditions in the interest of protecting industry, trade, and the public. The Guides cover such topics as deception, misrepresentation, and size and grade designations as they apply to labeling and advertising.

In addition, the following also may serve as a guide for other standards:

**a. Quality** – Nursery stock should not be dead or dying; seriously damaged, broken, or frozen; abnormally pot-bound; or harmed in any other way that would interfere with normal development after planting.

Quality standards may include plant hardiness requirements.

**b. Labeling** – The **botanical name and cultivar name** (when applicable) should be required, except on roses, fruit trees, and annuals. The following should be required for other kinds of nursery stock: **recognized common name and cultivar** for fruit trees; the **kind and cultivar** for turf; and the **cultivar name** for roses, annuals, dormant bulbs, tubers, roots, corms, rhizomes, pips, and other kinds of nursery stock. (However, exception may be made to allow the use of the recognized common name when no cultivar name has been given or can be determined.)

It is recommended that nursery stock be properly identified with the correct name when sold at wholesale and shipped, delivered, or transported to any purchaser.

Local ordinances might sometimes require informational labeling regarding mature plant size, poisonous plants, flowering dates, degree of messiness, amount of pollen produced, and other such characteristics. However, these matters are discouraged as subjects of state law.

**c. Grades** – Grades that might be established should be plant performance based and designed to help assure equity in the marketplace. When consideration is being given to establishing grades, the American Standard for Nursery Stock (ANSI Z60.1) and any grades already established by other states should be reviewed for acceptability.

**d. Advertisements** – Nursery laws should include a provision that makes it unlawful to:

Disseminate any false or misleading advertisement regarding nursery stock in any manner or by any means; or

Represent nursery stock as being registered or certified unless it has been produced and labeled in accordance with the procedures and in compliance with the rules and regulations of an official registration and certification agency.

**6. Licensing** – Persons applying to a state agency for accreditation, registration, a license to sell nursery stock, or a permit to operate a nursery should be required to provide basic information essential for the conduct of that state’s nursery regulatory program. That information is specified and discussed in [Appendix M](#).

## **7. Invoices and Nursery Stock Certificates**

**a. Invoices** – Each interstate shipment of nursery stock should be accompanied by a manifest that clearly indicates:

- 1) The name and address of the consignor (shipper or owner).
- 2) The name and address of the consignee (person to whom the shipment is forwarded or shipped) or the name of his or her agent.
- 3) An itemized list of the contents showing each plant species by container size or other distinguishing characteristics and the number of each in the shipment.

When the shipment is covered by a quarantine, it would be desirable to include the origin of the quarantined nursery stock. (See “Commodity Origin” discussion on page 14 of these Guidelines.)

### **b. Nursery Stock Certificates**

**1) General Requirements** – Each **commercial** interstate shipment of nursery stock must:

a) Have originated from a nursery/person that is properly accredited, licensed, or registered with the origin state government nursery inspection agency as an entity engaged in the business of producing or selling nursery stock and shipping it interstate; AND which is currently authorized to use that state governmental agency’s nursery stock certificate on interstate shipments.

b) Be accompanied by a nursery stock certificate which indicates that the nursery stock has been visually inspected and found to be in compliance with National Plant Board standards of pest freedom.

2) Format – Interstate Nursery Stock Certificates should be essentially in the following form:

## (Name of State) NURSERY STOCK CERTIFICATE

No. \_\_\_\_\_

**This plant material or nursery or premises from which this shipment was made has been visually inspected and found to be in compliance with National Plant Board standards of pest freedom.**

**(Date optional)**

**Issued by: (Name of State Governmental Nursery Inspection Agency and Headquarters City.)**

a) The certificate number should be a state governmental agency assigned accreditation, license, or registration number that is unique to the firm and which, when provided by any interested or affected party, can be used to identify the person making the shipment.

b) No particular size or shape restrictions are established except that any reproduction (printing, label, rubber stamp or other impression) must be conspicuous and legible. Any solid background color may be used provided that the printing on it is of sufficient contrast that there is good legibility.

**3) Noncommercial Shipments** – A special nursery stock certificate may be affixed by a regulatory official to any **private** shipment of plant materials inspected and found to be in compliance with NPB pest freedom standards. The state should develop a sequential numbering system for certificates used in this manner. Also see [Appendix J](#), page 80.

### **D. Nursery Stock Registration and Certification Programs**

Many state governmental agencies responsible for nursery stock regulatory activities also have developed registration and certification programs for various kinds of nursery stock. Programs exist for avocado, caneberry (e.g. raspberry), citrus, deciduous fruit and nut tree, garlic, grapevine, seed potato, strawberry, and vegetable transplant nursery stock.

The purpose of these programs is to deal with pest and other problems that cannot be effectively managed via the standard nursery regulatory program of visual inspection. These programs are, instead, based on official inspection, sampling, testing, and record-keeping aimed at assuring that the finished plant products meet specified requirements. Typically, laboratory testing, using well established diagnostic procedures, is the basis for determining disease or pest freedom. Targeted pests typically are viral, bacterial, and other plant pathogens; plant disorders; and soil-borne pests such as nematodes. Participation in registration and certification programs normally is voluntary and participants pay fees to cover the additional and special inspection and testing required. Nursery stock meeting the requirements of such programs is typically identified by tags, seals, or other indicia of certification affixed to the individual plants, bundles, cartons, or other units of sale.

Registered or certified nursery stock should meet the basic nursery standards as well as those separately established by the state's registration and certification rules or regulations. The much greater freedom from pests and diseases in some cases also may satisfy quarantine requirements.

### **E. Interstate Origin Inspection and Preclearance Programs**

Pest risk mitigation tactics or strategies can be enforced at the point of origin or at the point of arrival of the shipment. Enforcement at the point of origin can be more efficient and effective. It has the additional advantage of much more orderly marketing. Interstate origin inspection programs can be developed to achieve compliance with both quarantine and product quality standards. Interstate Origin Inspection is described in detail in [Appendix J](#).

## F. Phytosanitary Certification

Quarantine (phytosanitary) certification must accompany any shipment that contains nursery stock requiring such certification. An interstate nursery stock certificate (affirming that the shipment meets nursery stock pest freedom standards) alone is not adequate for reasons discussed in [Appendix K](#).

Acceptable phytosanitary certification is determined based on what is required in the quarantine, special permit, interstate origin inspection or preclearance program, or in any other specific directives issued by the responsible pest prevention agency of the state receiving the regulated commodity. Some states require original certificates for each shipment. Others might authorize the use of copies, printed labels, rubber stamp imprints, or other printed affirmations of compliance. Questions about acceptable declarations and formats should be directed to the agency that promulgated the quarantine.

A special green and white certificate format (as described in [Appendix J](#)) is being reserved by the NPB for interstate origin inspection and preclearance programs. The U.S. Department of Agriculture has a standard format for federal phytosanitary certificates. Many states have developed their own phytosanitary certificate formats for use in complying with the quarantine (phytosanitary requirements) of other states.

When products are being exported to a foreign country, issuing officials must make sure that the proper certificate is used. Issuance of a federal phytosanitary certificate is one way to assure compliance on a consistent basis. The USDA federal phytosanitary certificate is modeled after and consistent with the FAO model phytosanitary certificate which is accepted by all the countries that subscribe to the IPPC.

Certification requirements for nursery stock are shown schematically in [Figure – 6](#).

## G. Publication and Distribution of Nursery Lists

Each state governmental agency responsible for nursery program administration should compile annually a list of those persons duly accredited, licensed or registered for the wholesale marketing and interstate shipping of nursery stock. The list should include agents, brokers, commission merchants, dealers, and producers. A copy of the nursery list should be distributed within 30 days of publication to all other state governmental nursery regulatory agencies. The list should contain the title, address and telephone number of the person responsible for maintaining the list. Up-to-date information should be provided upon request.

(The potential exists for generating lists electronically. If an acceptable database could be developed and used by all the state nursery regulatory agencies, “read-only” access would enable much more timely checking of the status of shippers. The QNSC encourages the NPB to make this a short-term goal.)

## H. Inspector Qualifications

Inasmuch as nursery stock is so frequently affected by **quarantine** as well as nursery requirements, there is a need for **nursery** inspection personnel to have broad knowledge and experience in both fields.

Therefore, classroom and on-the-job training in both quarantine and nursery inspection should be given. A “qualified” nursery inspector is one that does not require close supervision and who is

authorized to issue certificates, inspection reports, etc. under his or her own signature. As in the case of quarantine inspectors, there are **desirable** minimum education and experience requirements:

1. Education – Graduation from an accredited college or university with a degree in a biological science (alternatively including specialization in agronomy, biology, entomology, horticulture, plant pathology, or zoology); AND
2. Experience – At least two years performing plant pest prevention work (alternatively including biological control, nursery inspection, quarantine inspection, pest management; or a combination thereof). Experience may come from employment in private industry or by a governmental agency.

## V. APPEAL AND DISPUTE SETTLEMENT

Occasionally, disputes over the validity of various quarantine or nursery regulations will arise. It is recognized that it is not desirable to settle such disagreements in the courts. Increasingly, settlement is via some mutually agreed upon mediation or arbitration procedure based on accepted standards. The appeal and dispute settlement procedure presented here is one approach that might be used by individual states on a case by case basis.

### A. Appeal

Any state governmental pest prevention agency aggrieved by the quarantine (phytosanitary) or nursery regulatory action of any other state may appeal to the National Plant Board (NPB) in writing. Appeals should be addressed to the current NPB chairperson.

**1. Emergency** – Emergency appeals should be referred for NPB review within 10 working days of the date of receipt by the NPB chairperson. Review should be completed within 30 working days from the date of receipt by the review committee. The criteria suggested for emergency appeals are:

- a) The action/requirements were imposed on an emergency basis without hearing or other opportunity for comment by those affected by the action; **and**
- b) The action significantly interrupts the marketing of restricted or quarantined commodities; **and**
- c) The appeal to the NPB chairperson is accompanied by a showing (facts and rationale) that the actions or requirements are unnecessary, biologically or scientifically unsound; or otherwise inappropriate or inconsistent with the NPB's plant quarantine and nursery program guidelines.

**2. Non-emergency** – Non-emergency appeals should be referred for NPB review within 30 days of receipt by the NPB chairperson. Review should be completed within 120 working days of the date of receipt by the review committee. Appeals must be accompanied by a showing (facts and rationale) that the actions or requirements are unnecessary, biologically, or scientifically unsound; or are otherwise inappropriate or inconsistent with the NPB's plant quarantine and nursery program guidelines.

### B. Review Committee

**1. Appointment** – The NPB chairperson may appoint a three-member review committee to handle each appeal. The review committee should consist of representatives of the involved/affected

regional plant boards and a USDA/APHIS employee with knowledge and expertise in plant quarantine and the kind of pest involved. The latter member should serve as the chairperson.

**2. Decisions** – The review committee should collect all the facts pertinent to the appeal and analyze them for biological and scientific integrity and consistency with the NPB’s plant quarantine and nursery inspection program guidelines. After review and evaluation, the committee should submit a draft written decision to the NPB chairperson and to the affected state agencies for review and comment. Comments should be received back within 14 working days. Copies of the comments made by the NPB chairperson and the state agencies should be shared among the NPB chairperson and affected states, so that all the parties will be informed of any additional input or argument being made.

The review committee should respond to the comments on the draft written decision within 14 working days. Upon receipt of the committee’s comments, the NPB chairperson should submit, within 14 working days, the final report.

In the case of emergency appeals, the time periods specified will have to be shortened to meet the 30 day timeframe specified in part A.

## **VI. PROFESSIONAL SOCIETIES AND ORGANIZATIONS**

In addition to the National and regional plant boards, there are many professional societies and organizations in the United States which relate to pest prevention and nursery issues. A society dealing with the broad area of regulatory pest prevention is the “Society for Regulatory Plant Protection.” A more focused society is the “Horticultural Inspection Society.”

There are also the trade organizations such as the American Farm Bureau Federation, state farm bureau organizations, the American Association of Nurserymen, state associations of nurserymen, the American and state societies of florists, etc. Professional societies include the American Phytopathological Society, the Entomological Society of America, and the Society of Nematologists.

The foregoing list of societies and organizations is only intended to be illustrative. There are many others, and not referring to them is not meant to indicate they are less important or valuable. Such organizations play a valuable part in keeping plant quarantine officers, nursery inspection personnel, nursery growers and others abreast of current issues, developments and trends. Trade organizations represent their membership before the Congress and state legislatures on legislative matters and before federal and state agencies on quarantine, pesticide and other regulatory issues.

Membership and participation in professional societies helps quarantine and nursery inspection personnel develop good working relationships with those organizations that directly interface with them in the performance of their duties. Additionally, it helps to keep them current on new technologies which can aid or facilitate their work.