

Background

According to the 2007 Census of Agriculture, there are just fewer than 55,000 greenhouse, nursery, and floriculture operations in the United States. The US nursery industry is regulated by the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) and the state departments of agriculture. The USDA focuses primarily on import and export certification to facilitate international trade, but also works cooperatively with state agencies to assist in the enforcement of federal domestic quarantines. State and local departments of agriculture enforce laws and regulations and determine standards of operation for nurseries involved in interstate and intrastate shipping. Regulatory agencies work cooperatively on issues involving interstate shipping through their membership in the National Plant Board (NPB). The NPB encourages harmonization of nursery certification through on going work by special committees and through the model nursery and plant pest laws.

Over the years the certification of nursery stock for intrastate, interstate, and international shipping has become increasingly challenging for regulatory agencies. Increased shipping volumes, greater numbers of exotic pests, the need for continual upgrading of technical skills for regulatory and industry staffs, and the enhanced requirements for interstate and international shipping have increased pressure on agencies with dwindling resources. In the early 1990's the Canadian Food Inspection Agency (CFIA) began piloting an audit based program for certification of nursery stock due to declining resources. The details of this systems approach to pest management in nursery stock was codified by the International Plant Protection Convention (IPPC) in 2002 in ISPM 14 (International Standard for Phytosanitary Measure) which allow for international shipping under these standards by countries recognizing this standard (NAPPO – Canada, Mexico and the US). Additionally, in the early 1990's the US and Canada entered into an agreement to recognize the Canadian/US Greenhouse Certification Program, an audit-based system that allows for shipping of greenhouse grown material without a load by load phytosanitary certification. Both of these programs have been successful, but with limited participation.

In 2004 *Phytophthora ramorum*, a new plant disease, inflicted a tremendous impact on the nursery production and shipping industries and greatly restricted shipment of material to Canada as well as interstate. At this time USDA developed what has come to be known as the US Nursery Certification Program (USNCP) to allow movement of plant material into Canada without a load by load phytosanitary inspection. The USNCP has become successful for international shipping in California, Washington and Oregon and is being considered by industry in other states as well.

In recent years due to the movement of quarantine pests such as *P. ramorum*, and gypsy moth, USDA has become increasingly concerned about violations of federal quarantines and the consistency of state certification standards. Consequently, the US Congress inserted language

and budget authority in the 2008 Farm Bill, section 10201 (d) for “development and implementation of—

- “(1) audit based certification systems, such as best management practices –
- “(A) to address plant pests; and
- “(B) To mitigate the risk of plant pest in the movement of plants and plant products;

NPB Activities:

This legislation has provided USDA and state agencies with the resources to review and modify certification systems to address pest risk and program consistency. The NPB has developed a cooperative agreement with USDA to look at the feasibility of audit-based certification systems for nursery production. To facilitate this review the NPB has assembled an Audit-based Certification (ABC) workgroup consisting of 10 plant board members including;

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| Gray Haun, Workgroup Chair –TN | Carl Schulze NPB, Pres.-NJ, |
| Wayne Dixon-FL | Stephen Schmidt-NC |
| Mike Colvin-CA | Gary McAninch-OR |
| Dan Kenny-OH | Colin Wamsley-MO |
| Ruth Welliver-PA | Carol Holko-MD |
| Aurelio Posadas NPB Exec. Sec. | Ken Rauscher, Project Assistant |

Since October, 2010 this workgroup in cooperation with USDA, APHIS has been meeting to develop, and review baseline nursery production information, gather industry input, review ongoing audit based studies, and study the components of audit based systems.

This workgroup met in February, 2011 in Riverdale to review previous reports and studies commissioned by USDA, study recent NPB nursery survey results, and look at various systems approaches including, International Organization for Standardization (ISO) Management, Hazard Analysis Critical Control Point (HAACP), and ISPM 14. The workgroup also gathered input from the American Nursery and Landscape Association (ANLA), reviewed several ongoing audit based programs, including the Canadian/US greenhouse program, the virus-tested deciduous fruit tree program, USNCP, three Oregon pilot programs and a Michigan certification program for spruce, fir, and Douglas fir for gypsy moth management. Finally, this workgroup reviewed the NPB Plant Quarantine, Nursery Inspection, and Certification Guidelines – Appendix L. This document which was produced in 1992, resides on the NPB website (QNSC Guidelines under Documents and Policy). It provides a blueprint for the role and limitation of nursery certification in the management of plant pests. The workgroup found that this document remains relevant and applicable.

An extensive discussion of the concepts presented led the committee to a number of broad conclusions:

1. The Nursery Survey results indicate that NPB members are interested in considering

alternative certification approaches but with concerns that include; resources and costs compared to existing programs, oversight, better management of risk, scientific data to support improved effectiveness, scalability, training, harmonization as opposed to federalization, and industry buy-in.

2. The industry is interested in reducing the risk of shipping and receiving invasive pests. Like regulatory agencies, they are concerned about resource demands, training and quality of their products. They are supportive of a system that is efficient and not onerous and are concerned about the use of terms like “audit based”. Perhaps the term risk based quality management would be a better choice to describe this approach.

3. USDA is clearly concerned about movement of quarantine pests and the lack of harmony or consistency relative to current state by state programs. They have stated that they believe at least some of the nursery stock produced under the current system is “dirty” meaning contaminated with regulated insects and disease. USDA representatives have suggested audit based systems similar to the USNCP as a means to increase documented responsibility with producers, incorporate risk analysis, identify critical control points (CCPs) and implement best management practices (BMPs). Additionally, they have pointed to the NPB QNSC Guidelines - Appendix L as a means to achieve greater uniformity.

Achieving Uniformity: The workgroup believes that generally the current interstate certification systems are not broken either for baseline certification or meeting quarantine pest requirements. However, there is potential to achieve greater uniformity in both areas. Appendix L suggests that the NPB could work to develop a model inspection program for the NPB itself or for promulgation by USDA as a federal voluntary program with a special “national” certificate that could be used by participating states. This federal voluntary program may be an appropriate approach to assist with uniformity at some time in the future, but the workgroup does not see this as an appropriate system at this time.

The Way Forward –

After considerable discussion, the workgroup developed the following conclusions and recommendations relative to audit based or risk based quality management systems:

1. ISO certification and strict HACCP systems are not appropriate or applicable in their entirety for the nursery industry. However, many of the concepts such as risk analysis, identification of CCPs and development of BMPs, audit provisions, training, documentation, role and responsibility identification are very important to any certification system. These concepts should be incorporated into baseline and quarantine compliance certification systems where ever possible.

2. The current baseline certification system for nursery stock is sound, but can be improved to make it more uniform, effective, and credible by implementation of the following measures:

A. Incorporation of Risk Analysis to assist in identification of CCPs and development of BMPs where possible and appropriate for production nurseries and dealers.

B. Providing uniform training for both regulatory officials and the nursery industry. This training should include short courses in such areas as auditing, pest risk analysis, pest identification, and compliance agreements, CCP, and BMP development, etc. Opportunities exist for collaborative development of training materials between industry, the land grants, USDA, NPB, and HIS members.

C. Updating the NPB Model Nursery Law. The original model law was crafted to provide a framework for comparison and potential harmonization of state laws. It should now be updated to incorporate language that would facilitate risk based, systems approaches to certification.

D. Development of Education and Outreach materials for both regulatory agencies and industry. This material would describe the components and benefits of the certification system, systems approaches, value of CCPs and BMPs, etc. in the context of improving existing effective programs, while promoting buy-in from the both regulators and industry.

3. The Quarantine Compliance Certification system provides that higher level of assurance required to meet state and federal quarantine pest concerns. There is an opportunity to reduce pest risk and improve assurances by utilization of risk based/ systems approach techniques in a step by step fashion over time. This can be accomplished by:

A. Transitioning to risk based/quality management systems utilizing such tools as compliance agreements, which include risk analyses, CCP's, BMP's, responsibility identification, and auditing for verification. Certification systems for gypsy moth, Japanese beetle, *P. ramorum*, and LBAM which already exist or are in stages of development, provide excellent opportunities for implementation of these audit based technology.

B. Transitioning away from load by load shipping point inspections. These inspections are a drain on agency resources and provide only a snap shot in time to support certification decisions. It is suggested that as much as possible, systems approach techniques such as risk analysis, CCP's, BMP's, etc., be incorporated in to these traditional inspection protocols.

4. Certification for international shipping may, for the near future, continue to utilize:

A. The United States Nursery Certification Program (USNCP) with its full audit based provisions or,

B. Phytosanitary certification utilizing load by load inspections. Again, it is desirable, where possible, to incorporate audit based techniques to help reduce pest risk.

5. The term Audit Based Nursery Certification seems onerous to some. Perhaps terms like Risk Based Quality Management or the like would be a better choice to describe this approach.

On going Activities:

To expand on and facilitate the recommendations listed above, the ABC workgroup has created four subcommittees. A listing of the subcommittees along with a draft of their mission and objectives is provided:

ABC subcommittees with draft mission statements and objectives.

Outreach and Education Subcommittee: Ruth Welliver, Carol Holko – leads

Mission: The mission of this Subcommittee is to develop materials and opportunities to express the significance of nursery certification and in particular the value of a systems approach for nursery certification to all stakeholders.

Objectives:

1. Develop outreach materials that support strong nursery certification principles, i.e. beginning with clean plants, maintaining pest free production and distribution environments, and marketing only certified material.
2. Develop material that promotes a systems approach to nursery certification, including but not limited to; establishing pest management standards, identifying CCPs and BMP options to address them, staff training, monitoring, inventory management, performance measures, and industry/regulator partnering.
3. Develop materials that provide an opportunity for promoting material produced under systems or risk based approach through a branding process.
4. Work with industry and the regulatory community to provide distribution of this material both electronically through webinars and through traditional and Industry Trade conferences and training sessions.

NPB Model Nursery Law Subcommittee:

Mission: The mission of the Model Law Subcommittee is to update and revise the model law and regulation to provide a template that promotes uniform state nursery certification legislation, improves pest management and quality nursery production, and advances the value of state certification programs and the image of the nursery industry.

Objectives:

1. Develop a model nursery law that contains the critical components (definitions, certification standards, fee structures, etc.) that individual states can adopt to revise legislation that promotes the current best management practices of production and certification.
2. Develop a model nursery regulation(s) that contains optional components (quarantine language, inspection protocols, tolerances, etc.) that individual states can adopt to revise or develop regulations.
3. This effort should allow for a great deal of flexibility and options while promoting uniform state statutes and regulations.

Training Subcommittee: Gary McAninch, Collin Wamsley – leads

Mission: The mission of this subcommittee is to develop training materials and opportunities for industry and state regulatory staffs that promote strong nursery certification programs and encourage systems or risk based approaches.

Objectives:

1. Develop training materials for the nursery production industry and plant brokers and dealers that promote effective pest management, and adoption of systems approaches including but not limited to; development of documented production standards, inventory management, monitoring, performance measures, and industry/regulator partnering.
2. Develop training materials for state regulatory staffs that increase knowledge of pests, improve inspection techniques and quarantine procedures, enhance communication and enforcement skills, and encourage transition to systems or risk based certification approaches.
3. Develop training opportunities for both production nurseries, brokers, dealers, and regulatory staffs that utilize the most practical technologies, including, but not limited to, webinars, short courses, conferences, and one on one training regarding audits, pest risk analysis, identification of CCP's, and BMP's.

Template/Compliance Agreement Subcommittee: Mike Colvin, Dan Kenny – leads

Mission: The mission of this subcommittee is to develop examples and templates of compliance agreements and other systems approach components which may be utilized as models by regulatory staffs and industry personnel.

Objectives:

1. Develop model compliance agreements and other system approach models for state and federal quarantine pests that include CCPs and BMPs, control scheduling, shipping windows, certification requirements, etc., which can be utilized by both the production industries and state regulatory staffs.
2. Develop strategies to encourage use of these templates and models for management of quarantine pests.

As these subcommittees begin their work, the intent is to solicit additional membership based on need and perspective.

The NPB welcomes the input of all stakeholders as we review our current processes and search for new systems based approaches that better meet the needs of the industry and regulatory agencies. The workgroup recognizes that in addition to plant producers, dealers and brokers for nursery stock are significant stakeholders in managing pest risks. Therefore the workgroup is interested in additional communication with this segment to assist in building a more holistic approach to appropriately certifying and distributing plant material.