



National Plant Board

SANC Program

SANC Evaluation
Committee

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Initial Evaluation Report for A Systems Approach to Nursery Certification (SANC) Pilot Program – Phase 1

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

Introduction

The Systems Approach to Nursery Certification (SANC) project has been in development since 2010. SANC is a voluntary harmonized audit-based systems approach to nursery certification, with a core goal of reducing pest risk associated with the movement of plant material in the United States. In 2014, eight nursery facilities were selected to participate in Phase 1 of the SANC Pilot program. Each of the eight facilities are currently in different stages of the program, with several anticipated to complete SANC certification in July, 2016. This interim evaluation of the progress of the Phase 1 Pilot was undertaken in large part to help direct future growth of the SANC program during Phase 2 of the pilot.

Evaluation Sources and Methods

The evaluation of the Phase 1 Pilot program was based on questionnaires, surveys, interviews, training evaluations and workshop notes. In total, eleven data sets were compiled and analyzed for key issues and trends. This data includes input from nurseries, state plant regulatory officials and state inspectors.

Results

Those trends and key issues that were deemed most important to the implementation of Phase 2 were prioritized for inclusion in this evaluation:

Communication

-Communication at all levels of SANC could be improved. Guidelines or conventions for communication could be developed to set realistic expectations for all SANC participants. A better message defining what SANC is and is not may be beneficial.

Training of State Inspection Staff and Utilization of AmericanHort® Consultants

-Hands-on training opportunities for inspection staff, including the USDA “Understanding Audit” workshop, were consistently regarded as valuable. The work of the AmericanHort® consultants in helping nurseries develop facility manuals and pest management plans must transition to state inspectors, and training for this should be addressed during Phase 2 of the Pilot.

Website

-The SANC website was not well regarded by the pilot nurseries, but regulatory staff had a more positive experience with it. It is suggested that in Phase 2 the website should be revised and content added to make it a more useful tool for all audiences.

Google Docs/Cloud Sharing

-Though usually an excellent method of communication, Google Docs and other cloud sharing technology proved to be an issue for regulatory participants who were limited by IT policies at their respective agencies. Technology compatibility and policies should be addressed in Phase 2.

Development of Target Outlines and Simplification of SANC Documents

-A timeline with target goals may be useful for Phase 2 participants to aid in planning and decision making. The risk assessment template document was found to be cumbersome, and would benefit from some streamlining and additional improvements.

Uniformity of SANC

-Universal concern about the uniformity of SANC was consistent throughout the data sets. Doubts surfaced about ensuring consistent quality of and uniform acceptance of SANC certified plant material. Training standards for inspectors and SPROS and long-term evaluation methods should be developed to illustrate the merit of the SANC program.

INTRODUCTION

Since 2010, the National Plant Board (NPB) has utilized Farm Bill funds to research and evaluate the possible implementation of a voluntary harmonized audit-based systems approach to nursery certification (SANC). The primary objective of this project is to develop the building blocks necessary for an audit-based systems approach for the safe interstate movement of plant propagative stock, tree fruit and small fruit nursery stock and finished plant material within the United States. It is envisioned that such an approach would be proactively positioned to address new or emerging pest and disease threats. This approach would minimize disruption in the marketplace as new and greater challenges are placed on existing regulatory programs and as new markets or new pests of regulatory concern emerge. In addition, it would facilitate the domestic movement of nursery stock within the United States. The implementation of a nationally harmonized, audit-based SANC program would establish a framework for plant export certification consistent with North American Plant Protection Organization and International Plant Protection Convention standards.

In late 2014, the SANC Pilot program (Phase 1) was implemented in all four of the plant board regions. Two nurseries in each region were selected to participate in the Pilot program, representing a variety of nursery and greenhouse operations in order to gather much needed information on the fit and applicability of this program. All eight facilities are in various phases of program implementation including risk assessment, pest management plan development and facility manual construction. Completion of SANC certification of several facilities is anticipated by July 2016.

The SANC program has a number of subcommittees to facilitate the formulation, development and implementation of the program's many elements. The Evaluation Subcommittee was established in late 2015 in concert with the first pilot facilities anticipating completion of SANC certification. Its mission is to evaluate the current SANC program, especially the Pilot program and the Outreach and Training products, with emphasis on input from stakeholders and recommend identified adjustments to improve the development of this potential certification approach.

Several surveys were conducted to solicit input from SANC stakeholders to gauge program strengths, weaknesses, opportunities and threats through the early stages of SANC program development. With the advent of the Pilot program, additional evaluation efforts are ongoing to better understand program performance and gain information to direct future growth and direction of the SANC program. Information gained by the Evaluation Subcommittee will be important as Phase 2 of the Pilot program is developed and implemented.

For this interim evaluation report, SANC documents, surveys, interviews and other communications were utilized to obtain data for analysis by the Evaluation Subcommittee. Essential Pilot program elements that received focus are selection of nurseries and greenhouses for participation, communication, training, resources, outreach materials, use of consultants and uniformity of SANC standards.

EVALUATION SOURCES AND METHODS

To evaluate the SANC Pilot Project - Phase 1, a variety of assessment methods were used to collect and evaluate data about the project and stakeholder experiences and perspectives. These methods included questionnaires, surveys, interviews, training evaluations as well as notes recorded during the 2016 Orlando SANC Subcommittee Workshop. A number of existing evaluation data sets were obtained from other SANC subcommittees and the SANC Core Group. In total, eleven unique data sets were collected as part of the evaluation effort. The data sets, which often included many individual responses, were compiled and analyzed for key issues and trends. For purposes of delivering timely information for the Phase 2 portion of the project, evaluation data collected and reported in this document are limited to the Pilot Project work.

The raw data from these information sources were compiled and analyzed for key issues. Then the key issues were cross-referenced across all data sets to identify the more consistently identified and priority issues that would be recommended for improvements in the planning and preparation for the Phase 2 implementation of the Pilot program.



Summary of Data Sets:

1) National Plant Board Audit-based Certification Survey, December 2010.

This 10 question survey was created using the SurveyMonkey® survey tool. The survey was sent to all NPB members by email. Of the 52 recipients, 39 members of the NPB completed the survey. Responses were analyzed and summarized by Carol Holko, Maryland Department of Agriculture and Gary McAninch, Oregon Department of Agriculture.

2) Pre and Post-training evaluations from the SANC Training Meeting, Kennett Square, PA, September 30 – October 1, 2014.

A seven question, pre-training survey was sent to participants in advance of the meeting to evaluate their level of understanding and perceptions of a risk-based, systems approach model. There were 12 responses to this email survey. At the conclusion of the training event, participants were given an evaluation form with 14 questions to collect feedback on the training and other training needs related to SANC. There were 14 responses to the post-training evaluation. These evaluations were prepared by the Training Subcommittee.

3) Post training evaluations from the SANC Training Sessions, Orlando, FL, January 27-28, 2015.

A nine question evaluation questionnaire was provided to participants at the conclusion of the training session to assess the value of the training methods and content and to identify future training needs. There were 11 response to this post-training evaluation developed by the Training Subcommittee.

- 4) Post-risk assessment evaluation of participating nursery inspectors, Fall 2015.**

When all pilot nurseries completed the risk assessment process, an 11 question survey was emailed to all participating state staff. The survey focused on how well prepared staff felt and how might they have been better prepared to participate in the risk assessment process. There were 11 responses to this survey. The survey was prepared by the Training Subcommittee.
- 5) Survey of SPRO's at the National Plant Board Annual Meeting, Sedona, AZ, August 3, 2015.**

This survey was handed out to State Plant Regulatory Officials at the NPB Business Meeting at the annual meeting. The survey consisted of five questions focused on gauging whether NPB members had received sufficient information about SANC and whether they felt their state could support the risk-based, systems approach model and what potential impediments might exist for their state to participate. There were 21 surveys completed. This survey was prepared by the SANC Core Team.
- 6) Review of Level 1 evaluations from the Understanding Audits training, January 2016.**

In this evaluation process, 77 Level-1 evaluations submitted at the conclusion of Understanding Audit Training were provided by the Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ). The evaluations were taken from six independent deliveries of Understanding Audit Training conducted between 2011 and 2015. A brief report was prepared by Tim Bergstrom, who conducted this evaluation.
- 7) Post-risk assessment, Pilot Nursery Interviews, January 2016.**

Twelve interview questions were developed by the Evaluation Subcommittee and assignments were made to committee members to interview the most appropriate person at each of the eight Phase 1 pilot nurseries. The questions focused on the preparation and participation in SANC and particularly in the risk assessment process. Six of the eight pilot nurseries were interviewed. Interviews were not conducted with two of the nurseries due to lack of availability.
- 8) Post training evaluations from the SANC Training Sessions, Orlando, FL, January 26-28, 2016.**

Six questions were developed by the Evaluation Subcommittee for use at the conclusion of the training event. The questions were intended to evaluate this training event, gauge participant SANC confidence level and obtain information about future training needs. There were 19 evaluations completed and returned.
- 9) Post-risk assessment, Pilot SPRO Interviews, February 2016.**

Twelve interview questions were adapted from the questions used in the post-risk assessment interviews of the pilot nurseries. Assignments were made to members of the Evaluation Subcommittee and interviews of the SPROs (and in some cases the nursery inspector) from each of the eight pilot states were conducted. The questions focused on the preparation and participation in SANC and particularly in the risk assessment process.
- 10) Notes from SPRO/Inspector discussion, SANC Subcommittee Workshop, Orlando, FL, January 26-28, 2016.**

Notes were taken during a discussion facilitated by the Evaluation Subcommittee. The discussion was wide ranging, covering all aspects of SANC. Key topics for discussion were the SANC website, training needs, how to operate SANC after the AmericanHort® consultants are done, and evaluating the effectiveness of SANC.

11) Notes from interview of three pilot nursery managers, SANC Subcommittee Workshop, Orlando FL, January 26-28, 2016.

During the course of the meeting, the Evaluation Subcommittee met with Paul Havener of Green leaf Nursery Company, Tom Buechel of McKay Nursery and Mike Richardson of Walla Walla Nursery Company, Inc. The Evaluation Subcommittee engaged in a wide ranging discussion with these nursery managers to gain insights on what went well, what could be improved, and what changes they would recommend for the SANC process.

The types of questions used to generate the eleven data sets included, 5-point scale (Likert Scale), dichotomous (yes/no), open-ended and closed-ended questions. Compiled data sets and summaries of key issues derived from the data sets are included as an appendix to this report.

RESULTS

Several trends emerged during the analyses of the data that were collected over the past several months regarding the SANC Pilot Project - Phase 1. The data originated from multiple participants and individuals associated with the project, including participating state plant regulatory officials, inspectors and nurseries. Due to time and resource constraints, the Evaluation Subcommittee focused on developing a prioritized list of issues which were most important to address as a Phase 2 implementation effort moves forward. The highest priority areas for consideration are communication, training, utilization of consultants, website development, cloud sharing/google docs, development of target outlines, maintaining consistency within the SANC Program, and simplification of SANC documents.

Communication

Communication at all levels of the SANC program could be improved. Specific examples identified from survey data included:

- Expectations for communication among industry consultants, pilot nurseries and regulatory officials have not been consistently met over the life of the program. All parties should be “in the loop” on communications and some communication conventions or guidelines could be developed to set realistic communication expectations for all SANC participants. It should be noted that states that started the SANC process seem to have experienced improved communication with industry consultants resulting from a pre-risk assessment webinar involving state staff. *(Reference: SPRO Interviews)*
- Staff from 23 states have been directly involved in SANC or have responded to surveys regarding the SANC Program. There are 27 states that have not committed staff to developing the SANC Program and who have not articulated when or if they will accept plant material produced under the SANC Program without additional certifications or inspections. Efforts should be made to strengthen and regularly communicate with all states on the progress of the SANC Program, and to encourage states to participate in or accept SANC-Certified Plant Material. *(Reference SPRO Survey ,2015)*
- Survey responses indicated that there was some level of confusion regarding what SANC is among State Plant Regulatory Officials and Inspection staff. Responses indicated that some perceived SANC as “self-certification.” Communication efforts could be targeted to more clearly define what SANC is and the benefits of SANC for both receiving and shipping states. *(Reference: SPRO Survey and Level 1 Audit training Evaluation)*

Training of State Inspection Staff and Utilization of AmericanHort® Consultants

- Survey data indicated that hands-on training opportunities were useful for Inspection staff and resulted in significant increase in capacity to understand and implement SANC. For example, a pre-training assessment of inspectors who participated in the Kennett Square Training indicated that 75% of the participants were uncomfortable with the principles of SANC. In a post-training

assessment, the responses reversed with 79% indicating they were comfortable with SANC principles. Responses to a question relating to an understanding of how critical control points related to SANC were similarly changed with training assistance. (Reference: *Kennett Square Trainings*)

- A majority of survey participants identified the Audit Training as a key training opportunity which helped them with their understanding of and ability to implement the SANC program. Audit training should be a prerequisite for inspectors participating in SANC. (Reference: *Audit Training Evaluation*)
- AmericanHort® consultants were unanimously identified as key players in the implementation of Phase 1. It is essential that this role be assumed by state regulatory staff as the SANC program moves forward. (Reference: *SPRO and Pilot Nursery Evaluations*)

As implementation moves to Phase 2 and beyond, funding for consultants to assist states and nurseries with SANC implementation is unlikely to continue. At some point in the near future, SANC implementation will be the responsibility of State Department of Agriculture staff. State staff are fully capable of this work, but capacity and depth must be built in our state staff for them to assume the role of the consultants. As Phase 2 progresses, the consultant role should shift to training state staff. The primary responsibility for development of facility manuals and pest management plans should fall on the participating nursery with guidance from the state inspectors. This subtle change in approach will enable state staff to develop depth and expertise in SANC implementation while consultants are still on board to provide technical assistance to the project.

Website

In general, SANC pilot nurseries did not utilize the website during their implementation of SANC through the Risk Assessment activity. The almost universal impression of pilot nurseries was that the website was cumbersome. During in person and telephone interviews, SANC Phase 1 nurseries indicated that an example of a SANC Facility Manual or Pest Management Plan would have been more useful to them as they developed their SANC Plans. State Plant Regulatory Officials and Horticultural Inspection Society members did use the website and considered it a useful tool; however, not as useful as face-to-face training or working directly with an industry consultant. Although the current website is laid out with separate sections for nursery and regulatory staff, it seems that the website could be more useful if it was revised with a more diverse group of users in mind. Potential user groups in addition to SANC nurseries and state regulatory personnel include: nurseries considering SANC, end users interested in SANC, university and extension personnel, and receivers of SANC Certified nursery stock. These new audiences may be very helpful in promoting SANC in the future and could benefit from a streamlined site that answers frequently asked questions in an easy to navigate format.

- Although the current website did not rate highly with Phase 1 nurseries, it was useful to regulatory staff. In Phase 2 of the Pilot Project, the website should be revised with attention given to the needs of the various audiences identified above who will use the site in the future. Examples include:
 - A succinct list of SANC benefits
 - Enhanced organizational structure
 - Improved recordkeeping

- Preservation and enhanced transfer of corporate culture
- Example Pest Management and Facility Plans
- An example timeline for nurseries interested in SANC implementation
- SANC Point of sale promotional tools

(Reference: Pilot Nursery Interviews and SPRO Interviews)

Google Docs/Cloud Sharing

Use of technology to aid in communication and in the development of program resources is an expectation of industry groups, SANC pilot nurseries, and state regulatory staff. Google Docs and cloud sharing proved to be excellent ways of communicating among industry representatives but tended to exclude state regulatory staff. SANC leadership and consultants involved in SANC should keep the following points in mind as Phase 2 begins to ensure that all parties involved in SANC can access and utilize technology/communication platforms. *(Reference SPRO Interviews and Kennett Square Evaluations)*

- State agencies have rigid IT policies that would not support electronic documents such as Google Docs or cloud-based software.
- Compatibility should have been determined before release of document.
- Not being able to review the risk assessment documents before the actual risk assessment had state staff members feeling inadequately prepared for working with the facility on their Risk Assessment.
- Sharing and editing the document was difficult due to technology constraints.
- Not all parties were familiar with the risk assessment spreadsheet going into the evaluation, either because of the incompatibility software issue or because the party member assumed the nursery would be responsible for completing the spreadsheet.

Development of Target Outlines and Simplification of SANC Documents

During phase 1 SANC implementation has been self-paced based upon the availability of consultants to assist with the various stages of the program and the nurseries desire to complete the project. As Phase 2 approaches it may be useful to develop some target outlines or timelines to guide phase 2 nurseries and states in implementation. Several of the state cooperators and nursery's noted that the risk assessment documents were repetitive and that autofill technology might make the process quicker and more intuitive. *(Reference: Orlando Evaluation 2016, SPRO Interviews, Pilot Nursery Interviews)*

- Underlying concerns of those surveyed was the scalability of the risk assessment plan for difference sized operations.
- The size of the risk assessment document is large and repetitive. Attempting to have a printed copy of the draft for note taking or clarification made for a huge, cumbersome document.
- Until the document is simplified and structured to be more 'form filled' and flexible, the nursery operator assigned the task of completion could be overwhelmed with producing BMP plans and manuals.
- Having examples of management practices would be valuable when doing the actual assessments.

- Many elements of the Risk Assessment were identified by the nurseries as practices already in place at their facility and intuitive to experienced growers. Translating those practices to actual production manuals takes resources of personnel and time that nurseries will have to invest.

Uniformity of SANC

Survey data and information gained through the process of interviewing State Plant Regulatory Officials and SANC Pilot Nursery staff indicated that there was universal concern over the uniformity of SANC. SPRO's were concerned about SANC's ability to insure consistent quality of nursery stock entering or exiting their respective states. SANC pilot nurseries had similar concerns that receiving states and nurseries would recognize material and not require additional declarations, inspections or paperwork. Some of this concern is rooted in historical perceptions and some in simply not knowing how all states view SANC. As was noted earlier in this report only 23 of 50 states have participated in SANC or indicated on some type of written survey that they will accept SANC. (*Reference: SPRO Interviews, SPRO Survey NPB 2015*)

As Phase 2 begins SANC leadership should consider the following:

- Implement a five to seven question SurveyMonkey® based survey to assess and document interest in SANC among states that have not yet participated or articulated their views on SANC.

In an effort to address concerns about uniformity of SANC, leadership should consider implementation of SANC training standards for inspectors and SPROs. The following actions should be given consideration:

- Development of new training modules
- Continuation of existing training modules
- Consider some type of certification for inspectors
- Develop a system or group for oversight of the standards
- Consider avenues for housing or offering the training through an unbiased agency or organization

Development and adherence to standards also relates to long-term evaluation of the SANC program. SANC requires behavioral change on the part of nurseries as well as regulatory staff. The theory of diffusion of innovations describes certain population groups and their attributes and willingness to adopt new ideas or technology. The "early adopters" are a small minority who can visualize how a new idea or technology can improve quality, profitability or quality of life. The majority of the population requires more time to adopt new technologies and often must be shown proof that a new idea can work. For SANC to be successful, leadership must identify some long-term measures that can be used to document SANC benefits and that can convince the majority of SANC's merits.

Some long-term evaluation measures include:

- Documentation that SANC minimizes pest movement as compared to traditional approaches.
- Successful adoption by states and recognition of SANC as the highest assurance of quality in the industry.

- Documentation of fewer violations/improved compliance through implementation of SANC.

Recommendation Items

The Evaluation Subcommittee offers a list of 10 action items for consideration by the SANC Leadership group. The Evaluation subcommittee believes that implementation of these ten action items will improve the SAC Program and aid in the increased adoption of the program among the industry and acceptance by regulatory staff. These ten action items should be considered on their merits and resources available for implementation.

- Develop conventions for communications
- Offer regular, general updates on SANC Progress to all NPB member states
- Refine the definition of SANC and share this definition broadly among NPB members
- Continue to offer hands-on training opportunities for inspectors involved in SANC
- Transition AmericanHort[®] Consultants to a training/consulting role with state staff in an effort to increase capacity among state staff
- Revise the website to offer information for specific audiences such as nurseries wanting to implement SANC
- Use technology that is appropriate and useful to all parties involved and test this technology prior to deployment
- Develop target outlines and timelines to help manage the SANC implementation process from beginning to end
- Acknowledge and address the issue of uniformity of SANC standards across the states
- Agree upon and begin tracking some long-term indicators of success for the SANC program- “Define Success” for this program

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