The Nature Conservancy
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4245 North Fairfax Drive
Arlington, VA 22203

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Dr. Arnold Tschanz
PPQ, APHIS
4700River Road Unit 140,
Riverdale, MD 20737–1231

Dear Dr. Tschanz,

The Nature Conservancy (the Conservancy) greatly appreciates this opportunity to participate in revisions to the regulations in 7 CFR part 319, specifically Secs. 319. 37 through 319.37-14, which pertain to phytosanitary conditions governing the importation of living plants, plant parts, seeds, and plant cuttings for planting or propagation (the "Q-37" regulations); and the regulations in 7 CFR part 360, ``Noxious Weed Regulations," which govern the importation of noxious weeds or plant products that could transport noxious weeds. The Conservancy considers improvement of these regulations to be an important component of a comprehensive program by which the USDA Animal and Plant Health Inspection Service (USDA APHIS) can minimize the risk of introduction of additional plant pests that threaten native trees and shrubs and non-native plants that potentially could invade natural ecosystems.

As agency officials well know, such improvement is critically important because the present regulatory system is failing to prevent introduction of either plant pests or potentially invasive plants. The present system was adopted in 1918, when the U.S. imported a few small shipments of plants each year and all of the shipments were treated to kill any accompanying insects. Now the U.S. imports more than 500 million plants each year from countries around the world – overwhelming APHIS' ability to assess the pest risk. As a result of rising trade volumes and restrictions on phytosanitary measures resulting from trade promotion, rising numbers of pests are entering the country. In its Implementation Plan for Section 10201 of the Food, Conservation and Energy Act of 2008, USDA APHIS notes that between 2001 and summer 2008, 212 pests had been reported as new to the United States – an average of 30 new pest introductions each year. Furthermore, the present regulatory system does not allow a pro-active approach to preventing introduction of potentially invasive plant taxa.

The Nature Conservancy is dedicated to preserving the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to

survive. The Conservancy has more than one million individual members and programs in all 50 states and in 31 nations. To date, we have been responsible for conserving more than 14.5 million acres in the United States, and more than 83.5 million acres internationally. The Conservancy itself owns more than 1,340 preserves in the United States – the largest private system of nature sanctuaries in the world. Our conservation work is grounded in sound science, strong partnerships with other landowners, and tangible results at local places.

The Nature Conservancy applauds the efforts of the USDA APHIS to improve the current plant protection regulations and supports the intent of the Not Authorized for Importation Pending Plant Risk Assessment (NAPPRA) rule to temporarily prohibit importation of plant taxa suspected of carrying damaging pests or having the potential to become invasive in the United States until risk assessment is complete and effective restrictions put in place. We agree that the current requirement that most imported plants-for-planting enter the United States through a USDA Plant Inspection Station does not provide an adequate level of protection against currently recognized quarantine pests, much less against potential new quarantine pests and particularly against potential noxious weeds. We agree that under the current system "during the time a PRA is being completed to evaluate the potential pest risk associated with a taxon, U.S. agricultural and environmental resources may be at risk due to the importation of the taxon." We also agree that the quarantine requirement should cover potential noxious weeds in addition to potential hosts of quarantine pests as proposed. The introduction of plant pests and pest plants via imports of plants for planting has already caused damage to the nation's farms, rangelands, and forests, and to our native biological diversity. Increased protection is clearly required to prevent further severe damage.

As is well documented in the published proposal, the ecological and economic impacts of the low proportion of imported non-native plant species that become invasive (pest plants) are sufficiently serious that prevention efforts to identify and prohibit import of new species likely to become invasive are critical. The Nature Conservancy has conducted research to evaluate whether such prediction is possible (Gordon et al. 2008a, Gordon et al. 2008b, Gordon and Gantz 2008) and has been consulting with the USDA APHIS PPQ CPHST PERAL group on the risk assessment protocol that they are developing. Designating NAPPRA species is a critical first step toward screening of all proposed introductions of unprecedented plant taxa.

The roster of damaging plant pests introduced on imported plants includes more than a dozen of the most deadly pests of forest trees, including chestnut blight (*Cryphonectria parasitica*), white pine blister rust (*Cronartium ribicola*), hemlock woolly adelid (*Adelges tsugae*), and sudden oak death (*Phytophthora ramorum*). Many of these pests and pathogens were unknown to science before their introduction to North America, so they would not have been identified through standard risk assessment procedures. Creating the NAPPRA category is an important first step toward developing a more pro-active and effective system for preventing additional introductions of poorly known plant pests.

We have several recommendations to improve the proposed revision to the Regulation, Importation of Plants for Planting; Establishing a Category of Plants for Planting Not Authorized for Importation Pending Pest Risk Analysis (NAPPRA). Several of these suggested improvements pertain to plants both as potentially invasive *per se* and as vectors of pests:

- Requests for Pest Risk Analysis (PRA) of any taxon listed under NAPPRA should be made by the exporting country rather than any interested party. This approach is consistent with requests required for agricultural imports of fruits and vegetables (p. 35405) and would allow APHIS PPQ to focus attention on PRAs for the highest priority taxa.

- The revised Regulations should clearly state that potential quarantine pests: 1) do not necessarily have to be under "Official Control" if they are already present but not yet widespread; and 2) may be later placed under "Official Control" as a condition of being listed as a Quarantine Pest following a PRA.

- Whether or not import may proceed during the 60 day comment period on NAPPRA listing additions (p. 36408) is unclear. Importation of any taxon considered under NAPPRA should be prohibited during the 60 day public comment period and subsequently until a final decision to list or not list is published (see also p. 36409).

- The regulation should clarify that import of *any* number of propagules (not only imports of more than 12 propagules) of a taxon listed in the NAPPRA category should be prohibited unless otherwise determined through the PRA.

- The process for adding new species to be considered for NAPPRA listing should allow for members of the public to suggest species. This process would be in addition to the continuing process under which Plant Protection and Quarantine (PPQ) will add species. Elaboration of that PPQ process would be beneficial.

- The definition of "Plants for Planting" in the proposal [see p. 36407 of the proposal] is less clear than the definition in the U.S. Plant Protection Act [7 U.S.C. Section 7702 (13)]: "any plant (including any plant part) for or capable of propagation, including a tree, a tissue culture, a plantlet culture, pollen, a shrub, a vine, a cutting, a graft, a scion, a bud, a bulb, a root, and a seed." This latter language should replace the language in the definitions section.

- The definition of "Quarantine pest" in the revised regulations (see p. 36497) should explicitly include plant taxa or plant pests (e.g., insects and pathogens) with potential (negative) environmental and public health importance in addition to species with potential (negative) economic importance. While the IPPC definition of quarantine pest refers only to economic importance, this is clarified in Appendix 2 to the IPPC Glossary of Phytosanitary Terms, which explains that the term ''economic importance'' is to be understood as having a broad meaning encompassing potential damage to the natural environment as well. The definition in the revised Regulations would be more easily understood if it incorporated impacts on agriculture, natural resources, public health, and the environment explicitly (as does the existing Plant Protection Act definition of noxious weeds). Thus, we recommend that the definition in the revised Regulations read : Quarantine pest: A plant pest or noxious weed of potential economic, environmental or public health importance to the United States and not yet present in the United States, or present but not widely distributed and being officially controlled.

- Implementation of the NAPPRA rule will require additional resources for APHIS and any other agencies conducting inspection at the ports (see the Preliminary Economic Analysis and Initial Regulatory Flexibility Analysis developed in 2007 and revised in 2008). The Conservancy supports additional funding allocations to agency budgets to cover such activities as development of the database of taxa currently being imported or imported in the past, improvements in and expanded use of post-entry quarantine, and encouraging plant importers to shift to lower-risk types of plants and adopt hazard-reduction operational practices. The Consensus Recommendations developed under the auspices of the Continental Dialogue on Non-Native Forest Insects and Diseases note that APHIS might explore development of private sector opportunities to provide additional funding sources, expertise and mechanisms that will enhance and expedite the completion of program components in a timely manner.

Suggested improvements that pertain to plants as potentially invasive *per se*:

- In order to exempt non-native plant species already present in the U.S. (called by APHIS staff "precedented") from NAPPRA consideration, we need better data on the species that have been imported. We believe that it is important to specifically define the term "precedented". We suggest that species with an import history of at least 1000 propagules into the U.S. in one or multiple shipments, resulting in individuals of that taxon still extant within the country be considered "precedented". However, we recognize the complexity in defining this status and would be happy to help in definition development.

- While the definition of "precedented" is being refined, data collection that will allow determination of this status should proceed. These data will require that both the full taxonomic identity of imported plants be collected and that a database of taxa historically imported to the U.S. be developed. We recommend that database development be initiated in Fiscal Year 2010.

- We request that PPQ post the full list of species evaluated for NAPPRA listing on-line: those that were evaluated but will not be listed as NAPPRA species, those that will be NAPPRA-listed, and those that were historically NAPPRA listed that were determined either to not pose a risk of invasion and were removed or were listed as noxious weeds. This would prevent repeated proposals of the same species and allow transparency in the listing process.

- We understand that the full risk assessment approach under development by PERAL is based on the Australian Weed Risk Assessment and is being compared for accuracy against that standard. If the methodology developed is as or more accurate than the Australian methodology, we fully support its use for determining whether species placed in the NAPPRA category will be rejected and placed on the noxious weed list or permitted for import (possibly with conditions), assuming that the tool is consistently applied under the conditions that generated the accuracy assessment.

- All macroalgae and colonial microalgae, rather than just green algae, should be included under the definition of "regulated plant" (p. 36411). Red (Rhodophyta) and brown algae (Phaeophyceae; kelps, *Fucus* spp., etc.) need the same level of evaluation as green algae, as

evidenced by the recent spread and discovery of the brown alga wakame, *Undaria pinnatifida,* in San Francisco Bay as well as the continuing spread and damage caused by the colonial microalgae *Didymosphenia geminatoa* (Didymo or "rock snot").

- We would also like clarification of the specific criteria APHIS will use to evaluate taxa for potential listing under NAPPRA, We recommend that the specific criteria used incorporate the historical invasiveness of the taxon:

  1) Because the invasiveness of a species anywhere outside its native range is the most accurate predictor of likely invasion in a new range,[1] we strongly support the use of that question for primary screening to place species on the NAPPRA list.

  2) However, species relatively new to cultivation will not yet have a clear record of potential invasiveness anywhere outside of their native range. As a result, we strongly recommend that any taxon that does not have at least a 50 year record of cultivation outside its native range be placed automatically on the NAPPRA list (we recognize that 50 years may be an underestimate but think it is a more realistic a time-frame than the more than 100-year lags that have been documented; see Kowarik 1995). This requirement will necessitate information on whether a taxon has been cultivated anywhere outside its native range. We suggest that if record of historical cultivation is not readily available through standard sources (see p. 36409), the taxon be placed on the NAPPRA list. Any party proposing to import a taxon listed because this historical cultivation was not known could request re-evaluation of NAPPRA status by supplying evidence of cultivation for over 50 years.

We regard the changes proposed through the creation of the NAPPRA category and process as the first step toward the long-term goal of comprehensively addressing prevention of unprecedented likely invaders introduced as plants for planting. All taxa new to the U.S. should be screened. We include in "new taxa" cultivars and varieties significantly different from the parent species, as defined by a process like the Infraspecific Taxon Protocol in the IFAS Assessment of Non-native Plants in Florida's Natural Areas (http://plants.ifas.ufl.edu/assessment/pdfs/infraspecific_taxon_protocol.pdf). Evaluation of infraspecific taxa would only be necessary if traits associated with invasiveness (i.e., not floral display, or plant size) are likely to be different from those of the parent species. We would like the USDA APHIS to acknowledge that screening of all unprecedented non-native taxa proposed for import to the country is their responsibility and ultimate goal. The database described above will facilitate progress toward this goal.

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[1] Mack, R.N. 1996. Predicting the identity and fate of plant invaders: emergent and emerging approaches. Biol. Conserv. 78: 107-121.

Reichard, S.H. and C.W. Hamilton. 1997. Predicting invasions of woody plants introduced into North America. Conserv. Biol. 11: 193-203.

Rejmánek, M., D.M. Richardson, S.I. Higgins, M. Pitcairn, and E. Grotkopp. 2005. Ecology of invasive plants: state of the art. Pages 104-161 *in* H.A. Monney, J.A. McNeely, L. Neville, P.J. Schei, and J. Waage, eds. Invasive Alien Species: A New Synthesis. Washington, D.C.: Island Press.

Suggested improvements in the proposal pertinent to use of NAPPRA to curtail introductions of damaging pests entering the country on plants for planting:

The NAPPRA proposal is a very welcome step that will strengthen APHIS' ability to prevent introductions of insects and diseases that threaten agriculture, natural resources, trees that beautify our cities and reduce climate change, etc. The improvement comes in the greater flexibility APHIS will have in order to prevent pest introductions under two circumstances which, at present, result in increased likelihood of pest entry. The first such circumstance is when scientific information suggests that certain plant taxa from a particular origin pose a pest risk but APHIS has not yet completed a pest risk assessment. The second set of circumstances is when the conditions under which plants that have been imported safely in the past change in ways that pose a higher pest risk. Such situations include:

- plants are being imported from new sources;
- plants are being produced using unexpected horticultural methods that may pose additional risk (such as, being collected from the wild rather than grown in a confined area);
- new pests are discovered in a production area;

With regard to the proposed criteria for inclusion of taxon/type/origin combinations in NAPPRA in response to pest risk, the Conservancy is concerned about the statement under "Sources of Scientific Evidence for Taxa That Are Potential Hosts of Quarantine Pests" (p. 36410 of the proposal) [referring to Paragraph (d) subparagraph 2 of the actual regulations] that a plant taxon reported to be a pest host under laboratory or experimental conditions might be "discounted" if APHIS determines that those conditions "are not relevant to the actual conditions under which the taxon would be grown and imported." We ask that APHIS clarify or at least provide examples of conditions which it considers to be relevant *versus* those it considers not to be relevant. These will not be simple questions to answer in practical terms. For example, it seems evident that a pathogen known to be root-borne but not to infect other portions of the plant would not pose a threat if imports are limited to unrooted cuttings. However, many pathogens are poorly known – making it difficult to evaluate whether they are truly so limited to particular plant parts. Certainly in the case of *Phytophthora ramorum,* knowledge of the plant parts infected has grown slowly and often as the result of experience with nursery infestations – that is, too late for effective prevention. We suggest that APHIS should, at a minimum, include in NAPPRA those laboratory hosts that co-occur with natural hosts in areas suspected of harboring the pathogen – including nurseries.

A second issue of possible relevance is the level of proof that APHIS will require in determining that a plant taxon is a "natural" host. Again in the case of *Phytophthora ramorum,* APHIS initially insisted that Koch's postulates be completed and accepted by the agency before recognizing a plant taxon to be a host of that pathogen. This approach resulted in continued movement of *P. ramorum* on hosts that had been identified by symptoms or other methods but for which this often-difficult text had not yet been completed. We suggest that APHIS recognize such suspected hosts – perhaps calling them "associated" hosts as it does with *P. ramorum*; and include them in the NAPPRA category at least until further study can clarify their relationship to the pathogen under consideration.

As APHIS officials are aware, The Nature Conservancy and other participants in the Continental Dialogue on Non-Native Forest Insects and Diseases have adopted a set of Consensus Recommendations for improving the Q-37 regulations. The Consensus Recommendations were developed with the engagement of the American Nursery and Landscape Association, and have that association's endorsement. The Consensus Recommendations note that risk reduction options that APHIS might adopt in response to such circumstances include the temporary prohibition on imports utilizing the NAPPRA category (as proposed in this rulemaking). The Consensus Recommendations go further - beyond the specific matter under consideration here (creation of the NAPPRA category) – in order to propose a comprehensive program. We look forward to working with APHIS to bring about additional improvements, and so make reference here to the other recommendations put forward by Continental Forest Dialogue participants. These other actions include:

- Encouraging importers to shift to types of plants that carry inherently lower risk of transporting pests, such as seed, tissue culture, and cuttings. APHIS could quickly conduct risk assessments on these lower-risk plant types, then apply less strict import restrictions to them. Such risk assessments should be a high priority for APHIS.
- Requiring additional plant types to be cleared through post-entry quarantine facilities that have been upgraded to ensure that pests cannot escape during the quarantine period.
- Increasing inspection intensity and upgrading Plant Inspection Stations.
- Considering a requirement that all incoming plants undergo a disinfestation treatment regardless of whether pests have been detected in the shipment. Research into effective and environmentally safe treatments is greatly needed.
- Over the long term, significant reductions in the risk of pest introductions will probably result largely from importers and foreign suppliers adopting voluntary best management practices (BMPs) or participating in formal, regulated hazard-reduction programs. Such programs implemented by both suppliers and importers should include effective pest detection, testing, and tracking mechanisms to enhance early detection of pests that occur despite the safeguards. However, development and validation of such programs will take time; in the interim, APHIS should apply the improvements in pest risk reduction described above.

The Consensus Recommendations state:

Goal 3: To achieve the Dialogue's Vision of drastically reducing and virtually eliminating the introduction of forest pests via the live plant pathway by 2015, APHIS must pro-actively fulfill its pest prevention obligations. Systems-based approaches offer great promise.

Elements of Position:

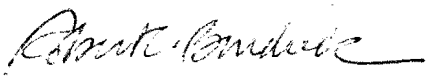
2. The live plant pathway governed partly by Q-37 is a high-risk pathway for introductions. Preventing introduction would entail:
    - Importation of plants that are free of regulated pests and essentially free of other pests, and
    - Early detection of residual pests and potential pests to enable cost-effective and successful eradication.

3. The Dialogue believes that the current Q-37 regulations are not adequately effective in preventing introduction of forest pests and pathogens on live plants and they must be revised. We applaud USDA APHIS for proposing modifications and for allowing public comment and suggestions.

6. USDA-APHIS should publicly specify a timeline within which the agency - in collaboration where possible with the industry - will swiftly act to reduce significantly the risk of introductions via live-plant imports while more comprehensive programs are developed. For plant/origin combinations not evaluated by PRA by the specified deadline, APHIS' actions might reflect the inherently lower risk associated with certain types of plants, such as seed and tissue culture plantlets.

The Nature Conservancy strongly supports APHIS' plans to strengthen the Q-37 regulations. Thank you for consideration of these comments. Please feel free to contact Faith Campbell at 703-841-4881 if you have any questions.

Sincerely,



Robert Bendick
Director, U.S. Government Relations

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