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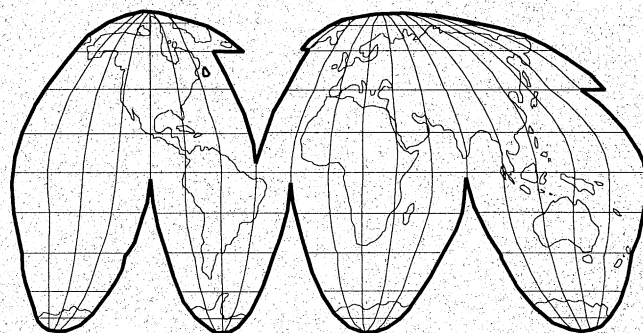
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Understanding Technical Barriers to Agricultural Trade

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The Political Economy of US Import Restrictions on Nursery Stock and Ornamental Plants in Growing Media

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International trade in agricultural products conveys the risk of transferring exotic pests across national borders. Of particular concern are pests “that may be of national economic importance to the country facing the risk represented by the pest, when it is not yet present, or present but not widespread and under active control” (International Plant Protection Convention). To address these concerns, countries enact sanitary and phytosanitary [SPS] regulations that reduce pest risks by restricting the movement of agricultural commodities. In general, the legitimacy of such regulations is well-recognized under international trade rules. Even so, the World Trade Organization [WTO] acknowledges the potential for, and possible widespread misuse of, unjustified SPS regulations as nontransparent barriers to trade.

In order to deter the enactment of unjustified SPS regulations, new formal dispute settlement procedures have been established under the WTO. These dispute settlement procedures emphasize the requirement for firm scientific risk analyses in the justification of SPS regulations (GATT 1994). But the efficacy of these procedures in constraining the enactment of unjustified SPS trade restrictions is not yet tested. Uimonen points out that scientists often disagree about the conditions that make risk analyses scientifically sound. Disagreements between scientists are common regarding many types of environmental risk assessments (Segerson 1994).

Procedures, like those of the WTO, that aim to deter the enactment of unjustified SPS regulations are further complicated by lack of systematic knowledge about the interactive roles that governments, regulatory agencies, and private interest groups play in their formulation. The mix of biological evidence, economics, and political interrelations that shape SPS regulations into either adequate technical safeguards or blatant barriers to trade are not well understood. Without this knowledge, it is difficult to assess the likely effectiveness of procedures intended to discourage the misuse of SPS regulations.

This paper seeks insight about the determinants of SPS trade regulations by analyzing the case for entry of nursery stock and ornamental plants in growing media into the United States [US]. A dispute over entry of these products, known as the Nursery Stock Case, has been ongoing since the early 1970s. It is one of the most complex and lengthy unilateral SPS regulatory processes that has occurred. While the complexity and length of the case are somewhat atypical, they provide an opportunity to observe how various important factors influence the regulatory outcomes.

In the Nursery Stock Case, requests have been considered for importation into the US of over sixty genera of plants, but new regulations have been issued for just ten: six in the early 1980s and an additional four in 1995. The long regulatory delays have been the result, at least in part, of the influence of interest groups over regulatory decision-makers. The mechanisms

by which these influences have been exerted are investigated through a political-economy “capture theory” framework (Stigler 1971; Peltzman 1976). Especially relevant to the analysis are studies by Bartel and Thomas (1987) and High and Coppin (1988) who showed that, based on environmental and safety concerns, high-cost firms may attempt capture of agencies to seek regulations that would act as barriers to entry of low-cost firms.

Differences among the behavior of technicians and non-elected and elected government officials are also germane to analysis of the Nursery Stock Case. Judgements of the technicians may differ from higher-level administrative decisions because politicians and high-level agency administrators are subject to oversight by the electorate, while technical agency staff are not. Likewise, agency decisions may vary from the policies that the Congress and the President have chosen (McCubbins et al. 1987). The consequences of such departures or “slack” may vary depending on whether the regulatory agency is an independent commission or a “line agency” hierarchically dependent on the Executive. A line agency may be more accountable to dictates of the Executive Branch, but as long as it satisfies the Executive’s priorities it may enjoy political support that makes direct interference with its decisions by interest groups more difficult (Ink 1984). In the US, SPS regulations are the responsibility of a line agency. Differences among the sources of influence on the agency’s decisions will be apparent between the hierarchical strata and over time.

Phytosanitary Rulemaking in the US

In the US, the Animal and Plant Health Inspection Service [APHIS] is responsible for protection of the environment and agriculture from exotic pests. APHIS was created in 1972 as a line agency within the United States Department of Agriculture [USDA], which is accountable to the Executive Branch of the government. APHIS complies with its mission by regulating the movement of plants and animals within the country and across its borders. The investigative work of APHIS is carried out through two principal units. Plant Protection and Quarantine [PPQ] focuses on plant health issues and Veterinary Services [VS] focuses on animal health. Several other units providing support to PPQ and VS. For instance, Policy and Program Development [PPD] is responsible for providing policy guidance and technical and scientific information, and Environmental Analysis and Documentation [EAD] prepares analyses concerning environmental impacts.

Since the mid 1980s, rulemaking by APHIS has been based on the Administrative Procedure Act [APA] of 1946. The APA mandates that regulatory agencies follow certain procedures to facilitate participation of interested parties in the regulatory process. For APHIS, the most common regulatory process is “informal rulemaking.”

The first step in the informal rulemaking process is for APHIS to develop a “work plan” for investigation of a possible regulatory decision. After the work plan is approved within the agency, the technical analysis is undertaken. If a new regulation (which frequently is a modification of an existing rule) is considered feasible based on technical pest risk and risk management assessments, it is forwarded as a recommendation for a proposed rule. The recommendations for proposed rules are subject to internal review and revision by, among

others, APHIS administrators, the Office of General Counsel [OGC], which provides legal counsel for the USDA, and the Office of the Secretary of Agriculture. Within the Executive Branch, the Office of Management and Budget [OMB] is mandated to review “major rules,” which are regulatory actions expected to have an annual effect on the economy of \$100 million or more. Other rules may also be reviewed by OMB, and by other (political) agents of the Executive Branch.

Once a proposed rule is cleared within the Executive Branch, APHIS publishes it in the Federal Register. APHIS sets a date for a public hearing on the proposed rule and solicits written comments on its merits. Based on testimony at the hearing and the written comments received, APHIS reexamines the relevant issues and may or may not make changes to the proposed rule. The last step in the rulemaking process is publication of a final rule in the Federal Register. The final rule is published with written responses by APHIS to the public testimony and comments that were received (APHIS 1994). A final rule developed by APHIS through this regulatory process can be challenged in court by interested parties on either substantive or procedural grounds.

The importation of nursery stock, plants, roots, bulbs, seeds and other plant products into the US is regulated by Quarantine 37 (Title 7 CFR, Chapter III, Part 319.37), [Q-37]. Because the presence of soil may hide undesirable pathogens, Q-37 requires that most of the ornamental plants imported into the US enter only in a bare root condition. Plants imported with bare roots often suffer a high mortality rate during shipment (Eden et al. 1985).

In 1974, the Netherlands Inspection Service reached an agreement with APHIS under which five plant genera (*Santipaulia* spp., *Polypodiophyta* spp., *Begonia* spp., *Peperomia* spp. and *Gloxinia* spp.) would be allowed to enter the US in soilless growing media. The growing media (including unused peat, sphagnum moss, vermiculite, and some synthetic foams like glass wool) would lower mortality rates during shipping but would involve less pest risk than soil (Title 7 CFR, Chapter III, Part 319.37-8). Under the 1974 agreement, entry of the five genera in growing media was to be allowed on a trial basis with the stipulation that the plants be produced under strict phytosanitary conditions that were described. The imposition of these “preclearance” conditions on Dutch producers was expected to reduce the burden on APHIS port inspectors while keeping the risk of introducing exotic pests to a minimum (Eden et al. 1985). This modest regulatory decision to allow imports, on a trial basis, of five genera from the Netherlands under specified preclearance conditions became the origin of the Nursery Stock Case that remains largely unresolved more than twenty years later.

The Nursery Stock Case

Our description of the Nursery Stock Case is divided into four regulatory periods.¹ The first period (1974-1982) is characterized by modification of the existing Q-37 regulations for a small number of genera with relatively low economic stakes for the domestic industry.

¹A more complete chronology and analysis of the Nursery Stock Case are provided by Romano (1995).

APHIS was able to publish final rules allowing the entry of six genera in sterile growing media because of the low economic stakes. The second regulatory period (1982-1987) is marked by an increase in the economic stakes as a consequence of requests received by APHIS to allow the entry of approximately sixty additional genera in growing media. The increased economic stakes from these multiple requests resulted in escalated opposition by the domestic industry. By successfully lobbying USDA, the domestic industry was able to reduce the political support APHIS received in the Nursery Stock Case and delay the regulatory process. The third regulatory period (1988-1994) is characterized by attempts by APHIS to reduce opposition by the domestic industry to modification of the quarantine by lowering the economic stakes at issue in the regulatory process, and by seeking consensus on risk assessments that would support modification of the rules governing nursery stock imports. The final regulatory period (1995-) shows the minimal success APHIS has achieved in the Nursery Stock Case. Only four additional genera have been approved for entry by 1996, and even this decision remains subject to a court challenge. The principal events in the Nursery Stock Case from 1974 through 1996 are summarized in Table 1.

Initial Easing of Restrictions

The 1974 preclearance agreement between APHIS and the Netherlands Inspection Service to allow importation of nursery stock in growing media on a trial basis was promptly opposed by the domestic industry. By 1977, industry representatives threatened APHIS with legal action because test shipments had been authorized under procedures that violated the APA. APHIS had neither published its agreement with the Netherlands Inspection Service in the Federal Register, nor given the domestic industry an opportunity to review the agreement (Peiffer 1988). However, the regulatory procedures APHIS followed in establishing the agreement on nursery stock were consistent with its common practices at the time risk analyses and import permits were rarely published prior to 1980. Hence, the agency was surprised by the *procedural* challenge from the domestic industry (Cooper, Frank).

Under the threat of legal action by the domestic industry, APHIS acknowledged that it had failed to proceed in compliance with the APA when reaching its agreement with the Netherlands Inspection Service. To compensate for this procedural "mistake," APHIS published a proposed rule in June 1979 to allow the entry of herbaceous plants and shrubs under the preclearance conditions specified earlier (Federal Register 1979). The domestic industry opposed the generality of the proposed rule. As a consequence, the agency published a final rule on May 13, 1980 allowing entry of only the five genera initially included in the trial agreement (Federal Register 1980). In support of this decision, APHIS cited the absence of pest infestations in the five years of trial shipments. A regulation approving importation of a sixth genera (*Hyacinthus spp.*) was published on January 22, 1982 (Federal Register 1982). This decision was based on a pest risk assessment by APHIS, not the results of trial imports. Publication of these two final rules concluded the first period of the Nursery Stock Case, which is characterized by an initial easing of import restrictions, procedural and risk-perception-based opposition by the domestic industry, and promulgation of new import regulations for six genera with low economic stakes.

Table 1. Main events in the Nursery Stock Case

1974-1975	APHIS and the Netherlands' Inspection Service reach an agreement allowing the importation of five plant genera (<i>Begonia spp.</i> , <i>Gloxinia spp.</i> , <i>Peperomia spp.</i> , <i>Polypodiophyta spp.</i> , and <i>Santipaulia spp.</i>) in growing media when they are produced under strict phytosanitary guidelines.
1980	APHIS publishes in the Federal Register a final rule allowing the entry of <i>Begonia spp.</i> , <i>Gloxinia spp.</i> , <i>Peperomia spp.</i> , <i>Polypodiophyta spp.</i> , and <i>Santipaulia spp.</i> in growing media when they are produced under strict phytosanitary guidelines.
1980-1983	APHIS receives requests asking the agency to allow the entry of about 60 genera in growing media. APHIS starts to assess the risk associated with the importation of the 60 genera.
1982	APHIS publishes in the Federal Register a final rule allowing the entry of <i>Hyacinthus spp.</i> in growing media when it is produced under strict phytosanitary guidelines.
1984	APHIS stops the regulatory process before completion of the risk analysis on the 60 genera.
1987	APHIS resumes the regulatory process.
1989	APHIS postpones the Nursery Stock Case, but publishes other revisions to Q-37. APHIS divides the Nursery Stock Case into phases. APHIS intends to evaluate 5-10 genera in each phase. APHIS decides to perform a new risk analysis.
1991	APHIS publishes in the Federal Register a methodology to analyze pest risks named "Standards for Pest Risk Analysis."
1992	APHIS assess risk for the five genera to be included in the first phase: <i>Alstromeria spp.</i> , <i>Ananas spp.</i> , <i>Anthurium spp.</i> , <i>Nidularium spp.</i> , and <i>Rhododendron spp.</i> This risk assessment is called the "Kahn report."
1993	APHIS publishes in the Federal Register a proposed rule allowing the entry of <i>Alstromeria spp.</i> , <i>Ananas spp.</i> , <i>Anthurium spp.</i> , <i>Nidularium spp.</i> , and <i>Rhododendron spp.</i> in growing media when they are produced under strict phytosanitary guidelines.
1994	APHIS postpones the entry of <i>Rhododendron spp.</i> pending consultation about the environmental impact of the proposed rule.
1995	APHIS publishes in the Federal Register a final rule allowing the entry of <i>Alstromeria spp.</i> , <i>Ananas spp.</i> , <i>Anthurium spp.</i> , and <i>Nidularium spp.</i> in growing media when they are produced under strict phytosanitary guidelines. The Professional Plant Growers Association (PPGA) fills a lawsuit against APHIS asking for a nullification of the 1995 final rule. A preliminary injunction against the rule has been denied, but the final outcome on this petition to the Court is still pending.

Source: Documents and public records located in APHIS' files on the Nursery Stock Case.

Cessation and Resumption of Regulatory Action

As APHIS was publishing its final rules in 1980 and 1982, five countries (Belgium, Denmark, The Netherlands, United Kingdom, and Israel) requested that APHIS allow the entry of approximately sixty additional plant genera in growing media. The requests by these countries substantially increased the economic stakes in the Nursery Stock Case. APHIS estimated that the entry of individual genera would have only marginal economic impacts on the domestic industry because of its diversified products. However, the simultaneous entry of the sixty genera would have an economic impact larger than \$100 million (Backus 1989). The regulatory process in this instance, was considered to be a major rule subject to review by OMB because of the large economic impact.

Motivated by the large economic stakes, the domestic industry pressed its opposition to wide-ranging revisions of Q-37. It commissioned its own analyses of pests susceptible to being hidden in growing media and sought termination of “any consideration of proposing an amendment to Q-37” (Stewart 1984). The industry’s lobbying effort was successful. In November 1983, at the conclusion of a meeting between APHIS, the administration of USDA, and a delegation of the domestic industry, it was announced by USDA that the effort to modify Q-37 “would be indefinitely shelved” (Peiffer 1988). This decision was consistent with a broader Executive Branch emphasis during the first term of the Reagan administration which encouraged regulatory agencies to be sensitive to the concerns of local industries (Campagna 1994).

The decision to halt the regulatory process in the Nursery Stock Case also occurred at a time when APHIS’ risk assessments for the sixty requested genera were well under way. An APHIS memo indicated that among sixty-four types of plants under consideration for importation, forty-two were to be recommended for entry, eight were not likely to meet the criteria for approval, and fourteen evaluations were still pending (APHIS 1985). Thus, the USDA decision to halt the regulatory process on plants in growing media appears to have been inconsistent with the technical conclusions of APHIS’ pest risk assessments. This inconsistency suggests that the USDA decision was taken by higher-level officials based on information and influence from outside the agency.

Cessation of the Nursery Stock Case led to objections by the Europeans about APHIS’ inaction, and to the suggestion of possible trade retaliation (American Embassy at the Hague 1984). But it was not until 1987 that APHIS was instructed to resume its work on nursery stock imports. The decision to resume regulatory activity was made by high-ranking APHIS and other USDA officials (Kahn 1988). Again this decision must have been based on influences external to the agency, since APHIS’ pest risk assessments had not changed. The USDA decision to resume regulatory activity in the Nursery Stock Case coincided with the initial Uruguay Round GATT negotiations, and with a period in which the Executive Branch placed increased emphasis on international trade expansion during the second term of President Reagan (Viscusi 1994; Stern 1994).

The second period of the Nursery Stock Case ends with APHIS being allowed to resume its regulatory analysis. This period is characterized by an increase in the economic stakes in

the Nursery Stock Case, by increased opposition by the domestic industry to any changes in the regulations, and by shifting political support for APHIS within the Executive Branch.

Attempting Regulatory Advances

Upon the resumption of the Nursery Stock Case, APHIS staff were optimistic that the regulatory process would lead to modifications of Q-37 (Hall 1988). However, representatives of the domestic industry, including the Professional Plant Growers Association [PPGA], the American Association of Nurserymen [AAN], and the Society of American Florists [SAF], reacted with strong opposition when they were notified of the intention by APHIS to resume its rulemaking (Bolusky 1988). Since the Nursery Stock Case was a major rule, there was some uncertainty within the agency about how to handle the industry pressure (Cooper, Frank).

Convinced that the domestic opposition was based on economic grounds and not significant pest risks, APHIS developed a new strategy designed to reduce the potential financial impact of the proposed revisions to Q-37. This strategy was to divide the regulatory process involving the sixty plant genera into several phases, each of which included only a few genera. APHIS hoped that the publication of its rules in phases, each bearing a relatively negligible economic impact, would reduce opposition by the domestic industry (Williamson 1989).

The initial APHIS strategy to “divide and proceed” was rejected by the OGC, which argued that division of the regulatory process to avoid the publication of a major rule violated the intent of the laws governing regulatory procedures (Backus 1990). The APHIS strategy remained to partition the Nursery Stock Case into phases. However, the justification APHIS gave for such a division of the regulatory process the second time was that new pest risk assessments were needed due to the length of time that had passed since the original assessments were completed. APHIS contended that the regulatory process could be accelerated if the new pest risk assessments were made for groups of five to ten genera, rather than all sixty genera simultaneously. This argument provided APHIS with a rationale for partitioning the regulatory process that withstood scrutiny by the OGC (Backus 1990), but it also required that the earlier pest risk assessments be re-examined.

With approval of its recommendation, APHIS attempted to move the regulatory process forward and reduce domestic industry opposition by developing new quantitative risk assessment procedures that would not be easily challenged. In order to gain a consensus, APHIS invited outside scientists to participate in development of the new procedures, which were termed the “Standards for Pest Risk Analysis” [Standards] for the importation of plants in growing media (PPD/APHIS/USDA 1990).

Initial hopes by APHIS for widespread acceptance of the Standards soon proved untenable. The formal quantitative analyses that were proposed were severely criticized by experts both inside and outside the agency, and were subsequently dropped. The Standards came to be seen only as a framework to guide analysis, not as a basis for settling the scientific merit of the pest risk analyses (Federal Register 1993).

To initiate its regulatory strategy, APHIS asked the foreign producers to provide priority lists from among the sixty genera for which they had requested modification of the quarantine (Williamson 1989). From these lists, APHIS selected five genera for its first phase of rulemaking. The Europeans may have encouraged APHIS to choose initial genera with little economic impact. Their rationale was to generate the least possible opposition by the domestic industry, hoping that modification of the quarantine for the initial genera would set a precedent that would facilitate new regulations for the remaining genera (Parzer).

The European minimal impact strategy was followed to an extent by APHIS, which decided that regulations would be considered for *Alstroemeria* spp., *Ananas* spp., *Anthurium* spp., *Nidularium* spp., and *Rhododendron* spp. in the first phase of its planned rulemaking (Federal Register 1991). Four of these five genera had negligible economic importance for the domestic industry, as shown in Table 2. Only *Rhododendron* spp. had potential economic impacts that could exceed one million dollars. APHIS concluded that the impact of changing the quarantine for the five genera together would bear little economic impact on the domestic nursery stock industry (PAD/PPD/APHIS/USDA 1992).

Table 2. Estimated 1990 wholesale production and value for *Alstroemeria*, *Anthurium*, *Ananas*, *Nidularium*, and *Rhododendron* spp.

Plant Genera	Propagative Plants Produced for Resale		Finished Plants	
	Number Produced	Value of Production	Number Produced	Value of Production
<i>Alstroemeria</i>	--	--	--	--
<i>Anthurium</i>	249,000	\$ 199,200	318,000	\$ 1,330,000
<i>Ananas</i>	--	--	--	--
<i>Nidularium</i>	--	--	--	--
<i>Rhododendron</i> ¹	3,531,000	\$2,471,700	6,817,000	\$32,630,800

The symbol "--" denotes negligible production.

¹Florist azalea prices were used as a proxy measure for *Rhododendron* spp.

Source: APHIS (1992), "Preliminary Economic Analysis of Proposed Rule Changes to 7 CFR Part 319, Quarantine 37 Regulations. Importations of Nursery Stock, Plants, Roots, Bulbs, Seeds, and other Plant Producers. Docket Number 89-154-1, PPD/APHIS, August 24, 1992.

A pest risk assessment for the five genera was published by APHIS in April 1992. This assessment, known as the "Kahn Report," was intended to provide a basis for consensus among the interested parties about the technical risks associated with nursery stock imports. APHIS enlisted external scientists in the preparation of the Kahn Report to reduce potential industry criticisms of the pest risk assessments. However, the Kahn Report was plagued by dissension.

A fundamental source of disagreement between the APHIS and industry scientists arose from different perceptions of the risk involved in the Nursery Stock Case. APHIS scientists evaluated risk by focusing on the probability of occurrence of previously identified pests. Some of the scientists supporting the domestic industry focused on worst-case-scenarios involving possible unknown pests (Carlson 1995a). Broadly speaking, while APHIS scientists advocated a minimal risk criteria, some of the scientists associated with the domestic industry implicitly promoted a zero-risk approach.

Differences in risk criteria were not the only reason that the Kahn Report was not effective in stemming disputes over the scientific evidence. Under instructions from APHIS, a controversial assumption was applied in the analysis for the Kahn Report. The investigators who participated were instructed by APHIS to assume that port inspections were the only safeguard available against the introduction of exotic pests (Kahn et al. 1992). Therefore, APHIS asked the scientists to assess pest risks without assuming the existence of preclearance safeguards such as those in place in the earlier agreements with The Netherlands. The levels of pest risk determined in the Kahn Report may have been unnecessarily large because of the assumption of reliance only on port inspections. This became a source of subsequent controversy in the Nursery Stock Case. In particular, for *Rhododendron spp.* the Kahn Report suggested that entry “be listed as prohibited from all countries” (Kahn et al. 1992).

The reasoning behind this APHIS recommendation has not been published. The assumption that port inspections would be the only safeguard may have been aimed at simplifying the risk assessments by reducing disagreements among the scientists with respect to the adequacy of possible preclearance safeguards imposed on foreign producers. Alternatively, APHIS may have sought to decouple future decisions about pest risk *management* from the pest risk assessments reached by the panel of experts. Decoupling of risk management decisions from the risk assessments would provide APHIS with some latitude for setting regulations not explicitly constrained by the conclusions reached in the Kahn Report.

Whatever the reasons, APHIS’ decision to base pest risk assessment only on port inspections did not reduce the controversy. Some scientists with close ties to the domestic industry resigned from the panel. This weakened APHIS’ claim to having achieved a consensus on the pest risk assessments, and within APHIS there was a perception afterwards that the pest risk strategy had suffered from this and other procedural mistakes (Royer).

Despite its failure to obtain broad consensus on the scientific pest risk assessments, on September 7, 1993 APHIS published a proposed rule that would allow the importation in growing media of the five genera under consideration. The proposed rule specified preclearance conditions under which the plants had to be produced to qualify for importation (Federal Register 1993). Scientists supporting the domestic industry raised questions about the adequacy of the preclearance conditions APHIS sought to impose on foreign producers (Chase 1993). Other objections continued to be raised over operational concerns, such as a lack of confidence about the capacity of APHIS to enforce the preclearance agreements, especially when the agency faced severe budget constraints (Lehman 1985).

Thus, the third regulatory period of the Nursery Stock Case is characterized by APHIS' attempts to reduce the economic stakes of the regulations through sequenced phases of the regulatory process, by attempts to produce scientific consensus on pest risk assessment, and by publication of a proposed rule for importation of five genera of nursery stock despite objections by the domestic industry.

Partial Easing of the Import Restrictions

The proposed rule of September 7, 1993 represented the first publication of a regulatory action taken by APHIS to allow the entry of nursery stock in growing media in eleven years. Testimony obtained at a public hearing on the rule and the written comments received during the comment period indicated intense domestic opposition to entry of the five proposed genera, especially *Rhododendron spp.* APHIS had anticipated this opposition and had discussed deleting *Rhododendron spp.* before publication of the proposed rule, but had decided against such a course of action (Chuck 1994; Cooper 1994).

The intense opposition to importation of the additional nursery stock in growing media by the domestic industry occurred in spite of the relative minor economic impact of the five genera included in the proposed rule. The domestic industry was aware of APHIS' intention to proceed in phases to reassess the regulations for sixty or more genera. The division of the regulation into phases, each of relatively minor economic importance, did not lessen the domestic industry's conviction that, in the end, these phases could have substantial economic impacts. The domestic industry hoped to avoid a precedent in the first phase of APHIS' planned rulemaking that could facilitate the entry of other plants in growing media (*American Nurserymen* 1995).

In this context, the controversy over *Rhododendron spp.* took a curious turn in April 1994. EAD advised that consultation with the US Fish and Wildlife Service [FWS] was necessary before APHIS could reach a decision on importation of *Rhododendron spp.* This consultation was recommended in order to insure compliance of the nursery stock regulations with the Endangered Species Act (Bausch 1994).

When APHIS published a final rule on the five proposed genera on January 13, 1995, preclearance conditions were given for importation of four genera in growing media (Federal Register 1995). For *Rhododendron spp.*, the EAD recommendation became a convenient basis for a decision to postpone the final rule.

Despite the very limited economic impacts possible from the approved imports, the final rule published in January 1995 did not settle the nursery stock dispute, even for the four approved genera. In February 1995, the PPGA sued APHIS. The PPGA asked the courts for preliminary and permanent injunctions halting implementation of the January 1995 final rule. The PPGA invoked substantive and procedural criteria for its legal action. It contended that APHIS' pest risk assessment and pest risk management strategies were inadequate to protect the domestic industry from harm. The PPGA suit also argued that APHIS had again failed to comply with the APA in reaching its decisions by allowing interested parties to

participate in the pest risk assessment but not in design of the pest risk management strategy (Carlson 1995a).

The PPGA suit divided the domestic industry. In spite of having shared the leadership of the opposition to revisions of Q-37, the two other major industry organizations (AAN and SAF), declined to join PPGA in its legal action. The PPGA represents a narrow spectrum of nursery industry interests, concentrated on production. AAN and SAF represent members with more diverse interests, including those involved in wholesale and retail trade that would benefit from increased market access for imported nursery stock. A judicial confrontation with APHIS was more attractive to the PPGA than it was to the organizations whose members included a broader spectrum of industry interests. This heterogeneity of interests within the domestic industry was not apparent to APHIS prior to the legal challenge to the final rule (Cooper, Frank).

An initial judicial ruling on March 14, 1995 rejected the PPGA's request for a preliminary injunction blocking importation of the four genera. After the preliminary ruling, the PPGA announced that it was willing to commit its resources to pursuing a lengthy legal battle (*American Nurserymen* 1995; Carlson 1995b). The final outcome of the legal dispute between the PPGA and APHIS remained unknown through August 1996.

Discussion and Conclusions

The Nursery Stock Case has proven to be a long and convoluted regulatory process. At least three different strategies were pursued by the domestic industry to impede regulatory decisions. The first of these strategies was to discredit APHIS' pest risk assessments, and to provide alternative risk assessments performed by outside scientists. The development by APHIS of the "Standards for Pest Risk Assessment," as well as the invitation to outside scientists to participate in preparation of both the Standards and the Kahn Report, indicates agency concern for developing pest risk analyses that, on scientific grounds, could not be easily disputed by the domestic industry. Although APHIS had been concerned about industry reactions before 1987, once the economic stakes in the Nursery Stock Case rose (with requests for entry of sixty genera) and the domestic industry increased its opposition to the revision to Q-37, APHIS intensified its efforts to produce a consensus on the risk analyses.

The alignment of credible non-agency scientists with the domestic industry provided the opponents of revisions to Q-37 with a credible basis for challenging the adequacy of the APHIS pest risk analyses. The opposition of these scientists to modification of Q-37 rested on several grounds. Some opposition arose from the different perceptions about the type of risks that should be considered and the level of risk tolerance that should be accepted. Other objections arose over the adequacy of the preclearance conditions or a lack of confidence about the capacity of APHIS to enforce them.

By failing to achieve a consensus on either the pest risk assessments or the risk management strategies, APHIS failed to avoid having credible scientists provide the domestic

industry with technical (biological) support for its opposition to any changes in the regulations in the Nursery Stock Case. Failure to reach consensus was based partly on decisions APHIS later judged to be mistakes. Other “procedural mistakes” that contributed to delays in the regulatory process included failure to comply with the APA in the late 1970s and failure to perform studies assessing the environmental impact associated with the introduction of *Rhododendron spp.* in the early 1990s. Each of these “mistakes” was exploited by the domestic industry or was used by the agency to delay a decision under industry pressure.

A second strategy pursued by the domestic industry to oppose new regulations in the Nursery Stock Case was to press for a reduction in political support for APHIS through political channels. This strategy was particularly successful in 1983, when APHIS was mandated by USDA administrators to cease work on Q-37. USDA receptiveness to the concerns of the domestic industry was consistent with a broader Executive Branch emphasis on sensitivity to the concerns of local industries. Likewise, the emergence of international trade as an Executive priority may have helped to move the Nursery Stock Case forward in 1987.

In the Nursery Stock Case, the relative success the domestic industry sometimes achieved in influencing the regulatory process through the Executive Branch was not as evident with the Congress. Only a few congressmen showed any direct interest in the Nursery Stock Case. The relatively small participation by the Congress in the Nursery Stock Case may reflect the dispersion of the domestic industry. Industries that are concentrated geographically may find it easier to extract responsiveness from their representatives. Lack of public interest in the nursery stock regulations may also have reduced congressional participation. In particular, environmental organizations showed little interest in whether nursery stock could be imported in growing media. If environmental activists were to join producer interests in opposition to changes to the quarantine, APHIS might face stronger political opposition. Such “bootlegger and Baptist” coalitions can arise when high cost firms seek to use environmental regulations to exclude low cost firms from entering a market.

Once APHIS received the political support that allowed it to resume its analysis in the Nursery Stock Case in 1987, it sought a strategy to minimize economic stakes as a motivation for the domestic industry to oppose the revision of Q-37. This prompted APHIS to partition the regulatory process into phases. The division of the Nursery Stock Case into phases was not as successful as APHIS apparently had hoped. The initial rationale faced legal challenges by OGC. More importantly, the division of the Nursery Stock Case into phases did not cause the domestic industry to lessen its opposition.

A third strategy applied by the domestic industry to delay the Nursery Stock Case was to seek court intervention. This was a risky decision by the PPGA, since a permanent court ruling in favor of APHIS could set a precedent contrary to the domestic industry’s position. The risk of such an outcome is not trivial, since the courts will be making a decision only on the appropriateness of the methodologies and procedures APHIS has applied in the Nursery Stock Case. Neither the scientific evidence against the APHIS conclusions nor any procedural mistakes by APHIS may be sufficient to have the courts sustain the PPGA challenge.

It is reasonable to assume that the PPGA was aware of the risk it faced when it brought APHIS to court. It may be that the objective for PPGA in bringing its suit is simply to delay the implementation of the final rule of January 1995 and, particularly, the regulatory process for the remaining genera. Even if the final court ruling is unfavorable, a considerable delay before the court reaches a decision could translate into a favorable outcome for PPGA on the remaining genera if the political environment were again to shift against APHIS making regulatory decisions that modify quarantine restrictions. After all, the industry's delaying strategies have now been largely effective for over twenty years.

In general, the success of the various delaying strategies by the domestic industry in the Nursery Stock Case has resulted from the complex interactions among four factors: the procedural mistakes by APHIS, the large economic stakes, APHIS' failure to achieve a consensus on pest risk analyses, and the intermittent political support received by the agency. In the early 1970s, when the economic stakes were low and industry opposition had not been fully articulated, political support was not a crucial determinant of the regulatory outcome. APHIS was able to issue final rules, based on trial imports or its own pest risk assessments and risk management strategies, that allowed entry of six genera of nursery stock in growing media. In subsequent years the scientific assessments by APHIS have been fairly consistent. With some regularity, APHIS has determined that importation of nursery stock in growing media does not pose unacceptable pest risks to domestic producers. However, once the economic stakes increased and the industry became more vocal, APHIS scientific conclusions were subject to more intense scrutiny and counter-evaluation. In this setting, political support for making regulatory decisions has proven critical to the outcome.

In 1983, political support for APHIS waned and the process ceased, despite substantial technical analysis supporting modification of the nursery stock quarantine. Political support became sufficient to restart the regulatory process in 1987 but subsequently very little regulatory decision making has occurred. One can easily view the partial final rule of 1995 as evidence that there remains insufficient political support to enable APHIS to make substantial changes to Q-37, even if scientific analysis by the regulatory agency were to support such rules. The long history of rulemaking in the unilateral Nursery Stock Case demonstrates how important multilateral commitment to the integrity of the decision-making process will be if the new dispute settlement processes of the WTO are to have any effect on the misuse of SPS regulations of international trade.

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