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Institutional Uncertainty at Home and Away: The Case of Lemons from Argentina

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Ultimately, the success of any trade relationship depends on achieving satisfactory levels of trust and confidence among trade partners. Uncertainty in such relationships has increased with the adoption of World Trade Organization [WTO] regionalization criteria. An important, and often overlooked, aspect of these criteria governing invasive species regulation is the degree of confidence and trust among regulatory agencies to conduct pest risk assessments, monitor changing conditions, and enforce standards (Thornsbury & Romano, 2002).

One policy response has been increased use of a systems approach; multi-step sanitary and phytosanitary regulations designed to reduce pest risks (USDA APHIS, 2002).[1] We rely on an ongoing case to illustrate attempts to alleviate uncertainty and the complexity of negotiations over policies to manage invasive species risk.[2] Specifically, we examine efforts by Argentina to gain access to U.S. lemon markets illustrating

- how private/public partnerships can build institutions in developing countries to increase the likelihood of access to new markets;
- linkages between institution building and increased trust between trade partners; and
- pressures from industries at home.

Pests of Concern

Argentina is currently the largest lemon producer in the world with approximately 30% of global production (more than 1 million metric tons a year) and a large exporter (more than 330,000 metric tons annually), mainly to European countries (Figure 1). Despite gaining entry to Europe and Japan, Argentine lemons are banned from U.S. markets. In the 1960s, Argentina was only a modest lemon producer with most orchards concentrated in the humid Northeastern states, where the plant disease citrus canker is prevalent. Concern over inadvertent transfer of citrus canker was a primary reason for the original U.S. ban on Argentine citrus (USDA APHIS, 1998b).[3]

Citrus canker is a highly contagious bacterial disease that causes leaf loss, premature fruit drop, and lesions on leaves, stems, and fruit. It is endemic in some major citrus-producing regions of the world (i.e., Brazil), but is generally considered manageable for fruit that will be further processed. The canker alters exterior appearance with a major impact on fresh fruit sales.

1. *An example includes a requirement to test for pathogen presence (step 1) and mandatory pesticide application (step 2), regardless of the outcome of step 1. These measures are independent and risk reduction is additive: if there is a failure in step 1 (the test is negative when in fact a pathogen is present), then there is not an automatic failure in step 2 (USDA APHIS, 2002). Such practices are applied to fresh avocado imports from Mexico into the United States (e.g., Orden & Romano, 1996).*
2. *There are many other examples of disputes over such policies. For example, in 2005, USDA identified 41 trade issues involving potential impediments to U.S. horticultural exports (USDA FAS, 2005). In addition, 33 complaints were raised in the WTO Sanitary and Phytosanitary Committee between 1995 and 2002 regarding policies governing trade in horticultural products (Roberts & Krissoff, 2004).*
3. *Other pests of concern were later identified by APHIS (fruit flies, sweet orange scab, and citrus black spot).*

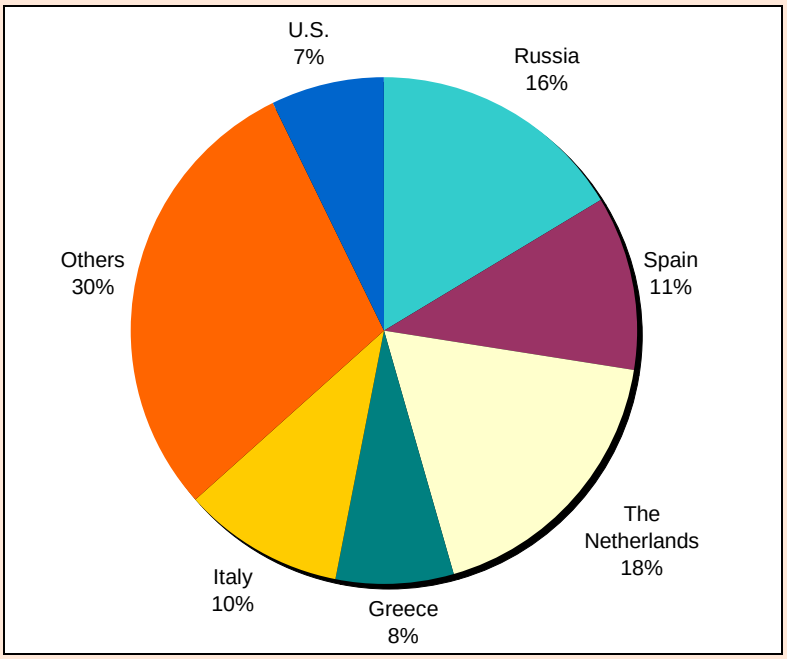

Figure 1. Destination of Argentine lemon exports, 2001. Year 2001 was chosen to show U.S. participation. For years other than 2001, exports to the U.S. equal zero.

In the early 1990s, a group of Argentine businessmen hoping to expand exports planted substantial citrus acreage in four Northwest Argentina states free of citrus canker. In 1991, citrus producers, processors, and exporters in this area established the Phytosanitary Association of Northwest Argentina (called AFINOA), a grower-sponsored institution with a goal of fostering cooperation to implement sanitary and phytosanitary [SPS] practices that would help promote citrus exports. The investors' plan was to apply modern technologies to produce fruit targeted towards European and American markets.

A Challenge to Argentine Institutions

In 1993 Argentina requested entry for fresh grapefruit, lemons, and oranges from the Northwest area to the United States. In 1994, a group of U.S. Animal and Plant Health Inspection Service [APHIS] pathologists visited to assess conditions. Preliminary results indicated that, although the region appeared to be canker-free, it did contain citrus black spot and sweet orange scab, two citrus fungal diseases not present in the United States. In 1995, APHIS denied the request for entry unless canker-free status could be documented and treatments for the other two diseases approved (Harlan Land Co. v. USDA, 2001).[4]

4. The United States was not canker-free at this time since the plant disease had been detected in the Miami-Dade County, Florida area during 1995. An aggressive eradication program was underway, and avoidance of additional pest entry was considered critical to success. The U.S. eradication program included quarantine restrictions on movement of domestic product as well.

The Argentine regulatory agency was neither willing nor able to satisfy U.S. concerns and the process stalled in a political dispute. The U.S. position requested scientific evidence of pest-free status. The Argentine position stated that, since European Union-approved policy allowed citrus imports from Northeastern pest-free orchards located in nonpest-free states, the risk of transferring disease from regions deemed pest-free had to be negligible. The Argentine position failed to acknowledge the myriad of different elements and conditions that influence species invasion across geographic areas, as well as different risk preferences and thresholds among potential importers. This illustrates how difficult it is for regulators in a developing country to understand the importance of following established sanitary protocols and to demonstrate scientifically proven phytosanitary health.

To some extent, this controversy underscores the differences in American and European approaches to invasive species management. While APHIS followed the WTO's regionalization principle to allow imports from certified pest-free regions, Europe followed protocols based only on identification of pest-free orchards (FVO, 2002). Momentum to break the impasse came from the Argentine grower organization AFINOA. This group enlisted the academic community to provide scientific expertise to satisfy the requests from APHIS. In addition, the grower organization gathered political support from the Governors of Northwest Argentina to improve and document phytosanitary measures insuring separation of products from pest-free regions. To address U.S. concerns over institutional uncertainty, the Government of Argentina began to elevate the status of its regulatory and enforcement

agencies, developing a new institutional umbrella (National Agrifood Health and Quality Service, or SENASA in Spanish).

Subsequently APHIS, given the scientific surveys and research results in 1996, in turn issued a supplemental pest risk assessment, which estimated that the median chance for establishment of pests of concern in the United States was negligible (1 in 3.2 million). In August 1998, APHIS published a proposed rule that allowed citrus imports using a systems approach to guard against black spot and sweet orange scab (USDA APHIS, 1998a). Included were safeguards at the grove and post-harvest levels, a phytosanitary certificate, cold treatment, disease detection protocols, and limitations on distribution and repackaging. Responding to the need to understand and accommodate APHIS' requirements, Argentina was able to move the process forward despite initial mistrust. As a result, the dispute evolved into a less-trade-restrictive protocol based on multiple safeguards built into the systems approach.

Still, increased trust among regulatory agencies had not been transferred to U.S. growers and public comments to the proposed rule revealed continued opposition. Concerns were raised about the scientific basis and execution of the systems approach. Meanwhile, regulatory officials were confident in the scientific merits of the proposal and APHIS moved forward with other aspects of the process. In late 1998, an economic analysis determined that the rule "[would] not have a significant economic impact on a substantial number of small entities" (USDA APHIS, 2000). An environmental assessment was published, which concluded there was negligible environmental risk but if the systems approach failed, the subsequent environmental impact would be "considerable" (USDA APHIS, 1998b).

Despite institutional confidence, domestic industry concerns led U.S. officials to be cautious in rule-making. Argentine officials eventually complained about unnecessary delays and APHIS published a final ruling on June 15, 2000, which allowed immediate entry (Magalhães, 2001; USDA APHIS, 2000). Regardless, opposition in the United States continued as growers questioned the ability of trade partner institutions to adequately monitor and carry-out the steps of the systems approach. Legislative representatives from California threatened APHIS with a withholding of fiscal year 2001 funding until after a review of the Argentine citrus rule and associated risk assessment were commissioned (NAWG, 2000; Costa, 2000).

To address grower concerns, APHIS personnel conducted an unannounced review in March 2001. Regulatory officials visited SENASA offices to verify the presence of sufficient technical personnel, examine agency records, and visit a laboratory. Throughout the review, APHIS did not discover any irregularities or violations and, despite strong continued opposition from California, lemon trade continued.

A Challenge to U.S. Institutions

On March 30, 2001, California and Arizona citrus growers filed a lawsuit directly challenging APHIS' scientific procedures and asking that the final rule be overturned (Harlan Land Co. v. USDA, 2001). Complainants argued that the final rule was unlawful because of its inconsistency with the Plant Quarantine Act of 1912. On May 12, 2001, arguments were

An Extract of the Court Ruling

1. "Having reviewed the Risk Assessment, the court concludes that the final rule is arbitrary and capricious because it is based on a faulty risk assessment. The uncertain nature of the Risk Assessment is illustrated by the fact that the risk of citrus black spot introduction increased significantly under the revised Risk Assessment from one chance in 3.2 million to one chance in 763,000 for the mean and from one chance in 840,000 to one chance in 189,000 for the 95 percentile. Although the risk is still lower than the risk of fruit fly introduction, where there is one chance in 350,000 for the mean and one chance in 93,000 for the 95 percentile value, the fact that there was a four-and-a-half fold increase in the risk of citrus black spot introduction at the 95 percentile because of faulty assumptions made by the APHIS scientists suggests that APHIS needs to reevaluate the Risk Assessment."

2. "Although the Risk Assessment take (sic) human error into content (sic), it may have understated human error in light of SENASA's failure to report the foot-and-mouth disease. Frankly, the court is concern (sic) about whether SENASA can be entrusted to enforce the mitigation measures used by the systems approach."

ACCORDINGLY, IT IS SO ORDERED that plaintiffs be granted summary judgment and defendants be denied summary judgment. IT IS FURTHER ORDERED that the Argentine citrus rule is suspended until a new rule is in place. The final rule is remanded to APHIS to address the concerns raised by the court."

Source: Harlan Land Co. v. USDA (2001).

heard in an Eastern District of California court. Institutional uncertainty surrounding both APHIS and SENASA was raised as prosecutors argued that the risk assessment was confusing and internally inconsistent. Further concerns were reliance on a foreign regulatory institution (SENASA) to implement, verify, and enforce part of the systems approach since, in the recent past, this institution had concealed an outbreak of foot-and-mouth disease for several months. The distrust of California growers for international regulatory officials had been extended to include domestic scientists and regulators. The court ruled in favor of the prosecution and entry of Argentine lemons was again banned as of September 29, 2001.

The Story Continues

With imports to the United States halted, Argentina announced in February 2002 that citrus canker had been detected in the Northwest states. Continued discussions between the two countries postponed an official APHIS site visit until the week of March 10, 2003. The goal was to demonstrate that, despite the loss of canker-free status, systems approach safeguards were rigorous enough to meet phytosanitary standards. This argument was not fundamentally different than that posited by Argentina in the 1990s. By 2003, however, the Argentine claim had been strengthened by additional scientific and institutional evidence. Based on results of the visit, APHIS formally recognized the appropriateness of the systems approach in place, but criticized the Argentine government for not implementing a canker eradication program (Wager-Page et al., 2003). Growers and policymakers in Argentina rejected the demand for such a program and the process remained stalled.

A new development in this story took place in January 10, 2006, when USDA officials declared defeat in their own canker eradication process announcing that Florida hurricanes had "so widely distributed [the disease] that eradication is infeasible" (Conner, 2006). There is a sense among Argentine officials that this announcement may induce APHIS to abandon the request for an eradication program in Northwest Argentina and instead develop a new protocol along the lines of the systems approach policies currently in place for Europe and Japan. In early 2006, a group of APHIS and SENASA officials met to further discuss the issue (Enright, 2006).

Lessons Learned

The Argentine lemon case reveals important lessons regarding trust and confidence among trade partners and the difficulties involved in decreasing institutional uncertainty. There is a demonstrated need for developing countries seeking access to international markets to organize and establish strategies based on scientific evidence and enforcement programs. Sanitary and phytosanitary policies based on multiple safeguards appear to be a valid tool to decrease regulatory uncertainty while achieving a reduction in pest risk, allowing trade partners to build mutual trust and confidence.

Phytosanitary measures must be consistently enforced over time by the exporting country to reduce distrust from the importing country; however, the regulatory agency in the exporting country is not the sole place where such uncertainty may arise. The dynamics of the lemon case shifted attention to credibility of domestic, as well as foreign, institutions. In this case, while trust and confidence between regulatory agencies has been slowly building, the same cannot be said for the industries involved. Although institutional and scientific adjustments in the developing country were crucial to build mutual trust and facilitate advancement of the regulatory process, some adjustments are still needed to overcome political pressures at home and abroad.

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