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The Dilemma of Safer and Freer Trade: The Case of the U.S. Nursery Industry

by Edward A. Evans and John J. VanSickle

The recent collapse of global trade talks in Cancun, Mexico, serves as a reminder of an ongoing debate about a nation's sovereign right to determine its own risk tolerance. The debate is important to the U.S. nursery industry, because the United States has maintained a high standard of plant health and safety. A well-developed safeguarding infrastructure has been successful in restricting the number of foreign pests and diseases entering the country while aggressively eradicating and controlling those that escape border protection. Moreover, local scientists have greatly improved the quality of germplasm and created a variety of disease-free (clean) planting materials. Independent testing agencies have ranked the U.S. nursery industry at the top (Kreith & Golino, 2003).

Potential changes in the way the industry currently operates, however, could emerge from U.S. commitments to international trade agreements—particularly the World Trade Organization's (WTO) Sanitary and Phytosanitary (SPS) Agreement, the North American Free Trade Agreement (NAFTA), and the proposed Free Trade Area of the Americas (FTAA). Pressures to open up the U.S. market and facilitate freer trade in nursery stocks and planting material could result in increased imports of damaging pests and diseases.

This paper considers issues facing the U.S. nursery industry in the context of the above debate and examines the risks to the industry of trading more freely in planting materials.

International Agricultural Trading Environment—SPS Agreement

An accepted international principle is that all nations have the right to adopt necessary measures

Advantages of Free Trade

In principle, a country can increase its real national income by more efficiently utilizing its limited resources and engaging in mutual trade. Consumers can enjoy a higher level of satisfaction, and producers can sell their products in an expanded market. However, when such trade encounters negative externalities or hidden costs (e.g., from importing damaging pests and diseases), acceptance of the general premise becomes blurred. The gains from trade are no longer a certainty. The decision of whether to engage in trade then considers whether the chance of winning the benefits outweighs the chance of losing them. If the benefits win, the risky choice of trading is far more attractive than the riskless alternative of not trading. (Other factors must be considered in the decision making process, such as distribution impacts and political considerations.)

to protect human, animal, and plant health. In the past, implementation of such measures was largely at the discretion of the importing countries, and the criterion of "zero risk" generally meant the import was banned.

Although SPS measures were considered important under previous General Agreement on Tariffs and Trade (GATT) rounds, they became parts of other agreements and were treated as exceptions to the main provisions fostering increased trade.¹ The decision to negotiate separate disciplines for SPS measures (Agreement on the Application of Sanitary and Phytosanitary Measures) during the 1986–1994 Uruguay Round marked a turning point in

1. *SPS measures were found in the original GATT Articles, mainly Article XX (General Exceptions) and later in the 1979 Tokyo Round Agreement on Technical Barriers to Trade (a pluri-lateral agreement known as the Standards Code).*

Bovine Spongiform Encephalopathy

Bovine Spongiform Encephalopathy (BSE), commonly referred to as “mad cow disease,” is a slowly progressive, degenerative, fatal disease affecting the central nervous system of adult cattle. Since first identified in 1986, there have been more than 180,000 cases reported worldwide, with 95% of the cases occurring in the United Kingdom. The disease has been linked to the fatal human illness Creutzfeldt-Jacob Disease (vCJD). The exact origin of BSE remains uncertain, but it was apparently transmitted in cattle in feed supplements that contained meat and bone meal. There is currently no method for diagnosis in early stages of infection and no cure for the disease, either in animals or in humans.

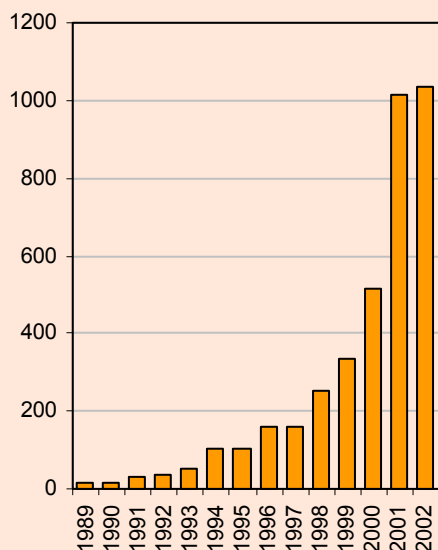


Figure 1. Number of reported cases of bovine spongiform encephalopathy (BSE) worldwide (excluding the United Kingdom), 1989–2002.

multilateral trade rules. The decision emphasized the risk of importing invasive pests, diseases, and food-borne illnesses.

The Agreement stemmed from the deeper integration of agriculture into international trade—particularly the decision to discipline the use of quantifiable nontariff trade barriers (such as quotas, subsidies, and licenses). Many countries, including the United States, feared that a reduction in the use and levels of these support measures might lead some importing countries to use technical trade barriers (notably SPS measures) to continue supporting their farming communities. The Agreement intended for SPS measures to ensure food safety and animal and plant health, not to unduly restrict market access for other countries (James & Anderson, 1998; Josling, 2002; Roberts, 1998).

The WTO’s SPS Agreement sets out a framework for the design of border protection and eradication measures while facilitating freer trade. The Agreement was based on the following five general principles:

1. *Harmonization*—encourages the adoption of measures that conform to international standards, guidelines, and/or recommendations of international agencies.
2. *Equivalence*—mutual recognition of different but equivalent measures to achieve international standards.
3. *Nondiscriminatory*—treating imports no differently than domestic produce.
4. *Transparency*—notifying trading partners of changes in their SPS measures, especially when the measures differ from international standards.
5. *Regionalization*—allowing continued exports from clean (disease-free) areas of affected countries.

The Agreement reaffirms the freedom of countries to choose their appropriate level of protection against imported pests and pathogens. However, when the measures do not conform to international standards, the importing country must demonstrate scientifically why the measures are needed and how they control risk.

Unintended Consequence of the Agreement

The Agreement has successfully facilitated international trade, but it has also increased the risks of bioinvasion—foreign pests and diseases entering a country. By restraining countries’ use of sanitary and phytosanitary issues as trade barriers, the Agreement has weakened national protections against bioinvasion (McNeely, 1999).² This comes at a time when global concerns for the environment are outpacing the development of proven control technologies (FAO, 2001). The global spread of unwanted pests and diseases has increased significantly (see box), as have their control costs. For example, USDA spending on its emergency eradication program has increased from approximately \$10 million dollars per year in the early 1990s to

2. *The situation resembles taking medicine to cure the common cold—its effectiveness weakens the immune system’s ability to fight off some of the more serious life-threatening diseases.*

\$334 million dollars per annum in 2001 (USDA Briefing Room, 2003).

The challenge confronting member countries is how to balance the unique regulatory needs against the general goal of freer trade. To illustrate these points, we now focus on the U.S. nursery industry.

Overview of the U.S. Nursery Industry³

According to the Census of Horticultural Specialties, the nursery industry includes nine plant groups: broadleaf evergreens; coniferous evergreens; deciduous shade trees, deciduous flowering trees; deciduous shrubs and other ornamentals; fruit and tree nut plants; cut and to-be-cut Christmas trees; propagation material (or lining-out stock); and transplants for commercial truck crop production.

Table 1 indicates that the estimated farm value of the industry increased steadily from \$5.3 billion in 1989 to \$8.93 billion in 2002—an annual rate of 4.4%. The slowdown in 2002 was due to a weak U.S. economy. Because the plants are generally utilized locally in local markets, consumption patterns mirrored production, increasing from \$5.4 billion to \$9.1 billion in 2001/02.

The value of nursery crop imports doubled between 1989 and 2002, increasing from \$0.14 billion to about \$0.30 billion. However, the share of domestic consumption accounted for by imports remained insignificant, increasing from 2.7% in 1989 to 3.4% in 2002. The relatively low ratio of imports to consumption primarily reflects stringent regulatory policies on imports mostly from Canada and the Netherlands. The export share of domestic production remained relatively flat over the period at 1.5%.

The Dilemma Facing the Nursery Industry

The disease- and pest-free standards for U.S. nursery products are considered world class (Kreith & Golino, 2003). The industry's clean stock status has been attributed largely to a federal system of quarantine regulations, under the Plant Quarantine Act of 1912,⁴ and a series of voluntary state certification programs. To enter the United States, foreign

Table 1. United States nursery crops: value of production, trade and consumption, 1989–2002 (million dollars).

| Year | Production | Consumption | Imports | Exports | Import share (%) |
|------|------------|-------------|---------|---------|------------------|
| 1989 | 5,329 | 5,393 | 143 | 79 | 2.7 |
| 1990 | 5,963 | 6,018 | 157 | 102 | 2.6 |
| 1991 | 6,182 | 6,241 | 166 | 107 | 2.7 |
| 1992 | 6,270 | 6,332 | 182 | 120 | 2.9 |
| 1993 | 6,325 | 6,373 | 192 | 143 | 3.0 |
| 1994 | 6,607 | 6,658 | 203 | 152 | 3.1 |
| 1995 | 7,007 | 7,109 | 240 | 138 | 3.4 |
| 1996 | 7,422 | 7,549 | 255 | 129 | 3.4 |
| 1997 | 7,981 | 8,099 | 264 | 146 | 3.3 |
| 1998 | 8,101 | 8,217 | 287 | 171 | 3.5 |
| 1999 | 8,524 | 8,668 | 301 | 156 | 3.5 |
| 2000 | 8,561 | 8,724 | 307 | 144 | 3.5 |
| 2001 | 8,927 | 9,095 | 312 | 144 | 3.4 |
| 2002 | 8,917 | 9,076 | 298 | 137 | 3.4 |

Note. Data from USDA (2003).

nursery stock must either originate from approved virus-certification programs abroad (similar to those in the United States) or be tested for both exotic and domestic pathogens. These restrictions have curtailed the imports of nursery stocks and reduced the potential for accidental or intentional introduction of damaging pathogens. The restrictions are thus an efficient way to manage plant disease control. They also help to minimize government expenses and costs to taxpayers.

The import restrictions are not consistent, however, with the general principles of the SPS agreement, especially nondiscrimination between foreign and domestic goods. The specific issue is how the IPPC sets out its rules governing the regulation of pests and diseases under the phytosanitary component of the agreement. The rule allows regulations only against damaging pests *not* known to occur in that country, or those targeted for eradication or control by an official program (Foster, 2000). The voluntary state certification program is not considered official. Consequently, federal quarantine actions that restrict entry of domestic pests

3. Information presented in this section is taken largely from USDA/ERS *Floriculture and Nursery Crops Situation and Outlook Yearbook*.

4. The Plant Quarantine Act of 1912 was repealed by the Plant Protection Act of 2000, which is considered to better reflect the general provisions of the SPS Agreement.

targeted by certification programs, but without official sanction, are considered discriminatory against foreign producers whether or not the domestic pest is known to cause serious economic damages. Many damaging pathogens that once plagued the industry have been eliminated (Foster, 2000).

Implications for the U.S. Nursery Industry

One implication is that every excluded domestic pest in the United States will require an official control program or removal of the exclusion. Either decision can be costly. Expanding the regulatory infrastructure would require considerable public funding. Moreover, continuing scientific advancements in pest eradication and control will make official control programs unnecessary, and removal of pests from the restricted lists could allow a resurgence of disease outbreaks. In the absence of natural predators, new difficult-to-detect invasive species could cause significant damage to agricultural systems and native species of plants and animals.

A move towards federal or state mandatory certification for nursery crops would satisfy the WTO's SPS principle of nondiscrimination against foreign products and preserve the current U.S. list of regulated pests. Potential shortcomings include high enforcement costs and opposition by nurserymen and growers.

The SPS Agreement recognizes the importance of a country protecting its resources. However, in its zeal to stamp out unfair trading practices and by requiring scientific proof of a disease, the Agreement limits a country's freedom to determine its own risk tolerance. Thus, the Agreement might inadvertently increase the spread of damaging pests and diseases by weakening national safeguards in an era of increased global trade and population mobility. A country's first line of defense in combating invasive species is to prevent their establishment. The benefits of freer trade also depend on limiting the detrimental impact—even if freer trade applies to only certified planting materials.

For More Information

Food and Agricultural Organization. (2001). *The state of food and agriculture 2001*. Rome, Italy: FAO. Available on the World Wide Web:

<http://www.fao.org/docrep/003/x9800e/x9800e14.htm>.

Foster, J.A. (2000). Free trade and the American fruit industry. Available on the World Wide Web: <http://fpms.ucdavis.edu/FreeTradeArticleJAFoster.pdf>.

James, S., & Anderson, K. (1998). On the need for more economics assessment of quarantine policies. *Australian Journal of Agricultural and Resource Economics*, 42(4), 425-444.

Josling, T. (2002, July). *Can one make the SPS Agreement work for small economies?* Paper presented at the 24th West Indies Agricultural Economics Conference, Grenada, West Indies.

Kreith, M., & Golino, D. (2003). Regulatory framework and institutional players. In D. Sumner (Ed.), *Exotic pests and diseases biology and economics for biosecurity*. Ames, IA: Iowa State University Press.

McNeely, J.A. (1999). An introduction to human dimensions of invasive alien species. In J.A. McNeely (Ed.), *The great reshuffling: Human dimensions of alien invasive species* (pp. 5-22). Gland, Switzerland: IUCN Publishers.

Roberts, D. (1998). *Implementation of the WTO agreement on the application of sanitary and phytosanitary measures* (Agriculture in the WTO/WRS-98-44). Washington, DC: USDA Economic Research Service.

USDA Briefing Room. (2003). *Invasive species management: Trends in emergency program expenditures*. Washington, DC: USDA. Available on the World Wide Web: <http://www.ers.usda.gov/briefing/invasivespecies/indemnities.htm>.

USDA. (2003). *Floriculture and nursery crops situation and outlook yearbook* (FLO-2003). Washington, DC: USDA Economic Research Service Market and Trade Economics Division.

World Trade Organization. (1995). Agreement on the application of sanitary and phytosanitary measures. In *Results of the Uruguay round of multilateral trade negotiations: The legal texts*. Geneva, Switzerland: World Trade Organization.

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