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**International Agricultural Trade and Policy Center**

**THE DILEMMA OF SAFER AND FREER TRADE: THE CASE  
OF THE U.S. NURSERY INDUSTRY**

By

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

Edward A. Evans and John J. VanSickle

Although the recent collapse of global trade talks in Cancun, Mexico had nothing to do with sanitary (human and animal safety) and phytosanitary (plant safety) issues, it serves as a reminder of an ongoing heated debate concerning the implications of Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), negotiated during the 1986-1994 Uruguay Round multilateral trade negotiations. Specifically, the debate focuses on the extent to which implementing the Agreement (aimed at promoting freer trade by preventing regulatory protectionism<sup>1</sup>) encroaches on a nation's sovereign right to determine the level of risk it is willing to accept.

The debate is important to the U.S. nursery industry because, over the years, the country has managed to maintain a fairly high standard of plant health and safety. This stems in part from a well-developed safeguarding infrastructure that has evolved over the last century, which has been fairly successful in restricting the number of foreign pests and diseases entering the country while aggressively eradicating and controlling those that escape border protection. Also, local scientists have greatly improved the quality of germplasm and have made available a variety of disease-free (clean) planting materials. Based on evaluations carried out by independent testing agencies, the U.S. nursery industry ranks at the top (Kreith and Golino, 2003).

However, potential changes in the way the industry currently operates could emerge from U.S. commitments to international trade agreements, particularly the World Trade Organization's (WTO) Sanitary and Phytosanitary (SPS) Agreement, the North

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<sup>1</sup> Illegitimate technical barriers to trade aimed at shielding domestic industry from international competition

American Free Trade Agreement (NAFTA), and the proposed Free Trade Area of the Americas (FTAA). Particularly, there are now pressures to open up the U.S. market and facilitate freer trade in nursery stocks and planting material that could result in increased imports of damaging pests and diseases. Such changes could undo some of the gains made by the industry over the years if necessary steps are not taken.

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

### **Advantages of Free Trade**

There is consensus among economists that a country can increase its level of real national income by efficiently utilizing its limited resources and engaging in mutual trade. Consumers can thus enjoy a higher level of satisfaction and producers have the opportunity to sell their products in an expanded market. However, when such trade carries with it the possibility of negative externalities or hidden costs (such as the likelihood of also importing damaging pests and diseases), acceptance of the general premise becomes somewhat blurred. In such situations the gains from trade are no longer a certainty. And, the decision of whether to engage in trade boils down to figuring out whether the chance of “winning” the benefits is great enough relative to the chance of “losing” them, so as to make the “risky” choice of trading far more attractive than the “riskless” alternative of not trading. Stated differently, consideration must now be given

to: a) the likelihood that the benefits from trade can still be preserved in the face of the uncertainties; and b) the magnitude of the net benefits.<sup>2</sup>

### **International Agricultural Trading Environment—SPS Agreement**

An accepted international principle is that all nations have the right to adopt necessary measures to protect human, animal, and plant health. In the past, implementation of such measures was left largely to the discretion of the importing countries, and they were undertaken based on the criterion of “zero risk” to the importing country. This meant that if the disease in question was present in the exporting country, the import was banned.

Although SPS measures can impede trade and were considered important under previous General Agreement on Tariffs and Trade (GATT) rounds, they were relegated to being included as parts of other agreements and as exceptions to the main provisions fostering increased trade.<sup>3</sup> The decision to negotiate separate disciplines for SPS measures (Agreement on the Application of Sanitary and Phytosanitary Measures) during the 1986-1994 Uruguay Round multilateral trade negotiations marked a turning point in the development of multilateral trade rules and gave prominence to issues related to agricultural trade and the risk of importing invasive pests and diseases and food-borne illnesses.

The impetus for negotiating a separate Agreement stemmed from the deeper integration of agriculture into the international trading system, particularly, the decision

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<sup>2</sup> Of course other factors have to be taken into account in the decision making process such as distribution impacts and political considerations.

<sup>3</sup> 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).

to discipline the use of quantifiable non-tariff trade barriers (such as quotas, subsidies, and licenses). Many countries, including the United States, feared that with a reduction in the use and levels of these support measures, some importing countries would turn to technical trade barriers (notably SPS measures) as a means of allowing them to continue providing support to their farming communities. The intent of the Agreement was to ensure that when SPS measures were applied, they were used only to the extent necessary to ensure food safety and animal and plant health, not to unduly restrict market access for other countries (James and Anderson, 1998; Josling, 2002; and Roberts, 1998).

The WTO's SPS Agreement sets out a framework to guide member governments in devising measures related to border protection and eradication while facilitating the WTO principle of encouraging freer trade. The Agreement was negotiated around the following five general principles:

1. *Harmonization*—encourages the adoption of measures that conform to international standards, guidelines, and/or recommendations of Codex Alimentarius, International Office of Epi-zoonosis (OIE), and the International Plant Protection Convention (IPPC).
2. *Equivalence*—mutual recognition of different but equivalent measures to achieve international standards.
3. *Non-discriminatory*—means imports are not to be treated any differently than domestic produce.
4. *Transparency*—requiring countries to notify trading partners of changes in their SPS measures, especially in situations where the measures differ from those of the international standards.

5. *Regionalization*—allows for continued exports from clean (disease-free) areas when such approval for the entire exporting nation is not feasible.

The Agreement reaffirms the fact that countries are free to choose their *appropriate level of protection* against imported pests and pathogens. However, in cases where the measures chosen are not in conformity with international standards, the onus is on the importing country to demonstrate the need for such measures on the basis of science and to show clearly how the measures are related to the control of the risk.

### **Unintended Consequence of the Agreement**

It is difficult to overlook the success the Agreement has had in facilitating international trade, but there is concern that it has also served to increase the risks of bioinvasion—the likelihood of foreign pests and diseases entering and becoming established in a country. In other words, by making it much more difficult for countries to use sanitary and phytosanitary issues as a means of erecting unjustified trade barriers, the Agreement, at the same time, has actually weakened national protections against bioinvasion and provides a greater opportunity for foreign species to spread accidentally or deliberately (McNeely, 1999).<sup>4</sup> This comes at a time when global concerns for the environment is shrinking the available means for combating such invasions faster than new technologies for control can be developed and proven (FAO, 2001). Together these developments have led to a noticeable increase in the spread of unwanted pests and diseases and the concomitant increase in the level of resources that countries now have to put aside to address this growing problem. In the United States, for example, USDA-

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<sup>4</sup> The situation can be likened to that of taking a particular medicine to cure the common cold—it gets the job done but, at the same time, weakens the body’s immune system to fight off some of the more serious life-threatening diseases.

APHIS spending on its emergency eradication program has increased twelve-fold since the implementation of the Agreement, jumping from approximately \$10 million dollars per annum spent in the early 1990s to the current estimated spending at \$120 million dollars per annum (USDA Briefing Room, 2003).

Therefore the challenge confronting members including the United States, is how to balance the regulatory needs of a country with the general goal of facilitating freer trade, that is, to what extent should the regulations that are acceptable and desirable to domestic stakeholders be made compatible with an international regime designed to facilitate trade? To illustrate the points of the discussion we now focus on the case of the U.S. Nursery Industry.

### **Brief overview of the U.S. Nursery Industry<sup>5</sup>**

According to the Census of Horticultural Specialties, the nursery industry includes nine plant groups: 1) broadleaf evergreens; 2) coniferous evergreens; 3) deciduous shade trees, 4) deciduous flowering trees; 5) deciduous shrubs and other ornamentals; 6) fruit and tree nut plants; 7) cut and to-be-cut Christmas trees; 8) propagation material, or lining out stock; and 9) transplants for commercial truck crop production. Table 1 shows the value of production, trade, and consumption, and Figure 1 illustrates the trends of selected variables.

Table 1 reveals that the estimated farm value of the industry in 2002 was approximately US \$8.92 billion. Between 1989 and 2001, the value of production increased steadily from \$5.3 billion to \$8.93 billion, at an annual rate of approximately

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<sup>5</sup> Information presented in this section is taken largely from USDA/ERS Floriculture and Nursery Crops Situation and Outlook Yearbook.



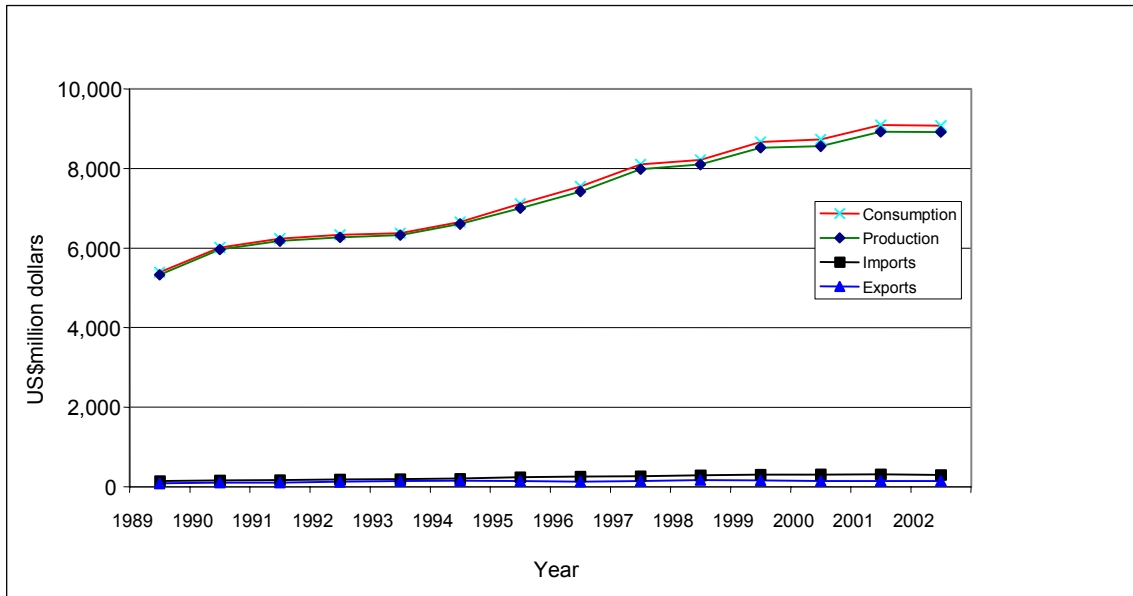
4.4 percent. The slow-down in 2002 was due to a weak U.S. economy caused by the recession in 2001. Because the bulk of the plants produced are utilized locally, consumption patterns mirrored production, increasing from \$5.4 billion to \$9.1 billion in 2001/02.

Of interest are the developments regarding the imports and exports of nursery crops. Table 1 shows that the value of nursery crop imports doubled between 1989 and

**Table 1. US Nursery Crops: Value of Production, Trade and Consumption,**

Year	1989 – 2002				Import Share (%)
	Production	Consumption	Imports	Exports	
	-----million dollars-----				
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

Source: Floriculture and Nursery Crops Situation and Outlook Yearbook, ERS/USDA, June 2003



**Figure 1. Trends in Value of Production, Trade, and Consumption of Nursery Crops, 1989-2002.**

2002, increasing from \$0.14 billion to about \$0.30 billion. However, the share of domestic consumption accounted for by imports remained relatively insignificant, increasing slightly from 2.7 percent in 1989 to 3.4 percent in 2002. The relatively low share of consumption accounted for by foreign supplies is due primarily to stringent regulatory policies governing the imports of such products, the majority of which come from Canada and the Netherlands. The export share of domestic production remained relatively flat over the period at 1.5 percent, with the value of exports increasing only slightly from \$0.08 billion in 1989 to \$0.14 in 2002.

### **The Dilemma Facing the Nursery Industry**

The disease- and pest-free standards for U.S. Nursery products are considered world class (Kreith and 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,<sup>6</sup> and a series of voluntary state certification programs. To gain entry into the United States, foreign nursery stock must either originate from approved virus certification programs abroad, similar to the ones in the United States, or be placed in quarantine, where they are tested for both exotic and domestic pathogens. This has severely curtailed the volume of nursery stocks entering the country and reduced the potential for accidental or intentional introduction of damaging pathogens not easily detected.

Within the confines of the system described above, U.S. growers currently enjoy a level of protection from diseased nursery stock imported from overseas, which carry exotic pathogens or those domestic ones that are targeted by state certification programs. As noted by Kreith and Golino (2003), since there is no cure or treatment for viruses in perennial crops already planted in the fields, this is an efficient way of managing plant health issues (from a disease control perspective). Also, by limiting the number of plants entering the country, there is less need for elaborate government facilities, which considerably minimizes government expenses and costs to taxpayers.

The problem, however, is that the above framework does not comport with the general principles of the SPS agreement, particularly the principle advocating non-discrimination between foreign and domestic goods. The specific issue has to do with the way the IPPC, the international body mandated by the WTO to oversee the implementation of the phytosanitary component of the Agreement, sets out its rules governing the regulation of pests and diseases. In particular, the rules state that a country can only regulate against damaging pests *not* known to occur in that country, or those

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<sup>6</sup> 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.

which occur in the country but are targeted for eradication or control by an official program (Foster, 2000). The state certification program being voluntary is not regarded as an official program. Consequently, actions taken by federal quarantine regulators to restrict entry of any domestic pests targeted by certification programs, but for which no official control programs are being implemented, are viewed as being discriminatory against foreign producers. This is irrespective of whether the particular domestic pest is known to cause serious economic damages. Hence, the IPPC approach effectively eliminates from the United States' current list of regulated pathogens a host of pests for which no official eradication or control programs are currently being undertaken. These include damaging pathogens that once plagued the industry, such as tristeza; stubborn; exocortis and psorosis of citrus; fanleaf; leafroll; corky bark and stem pitting of grape; green crinkle; flat limb; rubbery wood and blister bark of apple; stony pit; blister canker; little cherry; necrotic ringspot; prune dwarf; X-disease of stone fruits; and red stele of strawberry (Foster, 2000).

### **Implications for the US Nursery Industry**

Foster (2000) points out that an obvious implication is that for every domestic pest now included on the U.S. list of excluded pests, a decision will have to be made to either implement an official control program or remove the pest from the list. Either decision can prove to be costly. Moreover, many of these domestic pests are either on the verge of being eradicated or are significantly controlled—thanks to the work of scientists. In these cases, implementing official eradication programs at this time would not be warranted. However, removing such pests from the restricted lists and allowing for the

possible infected planting material to enter the country could result in a resurgence of some of these pathogens and severely undermine years of scientific work and investment.

Second, in the past, countries wishing to export nursery stock to the United States had to have in place a certification program that was similar to the U.S.'s states certification programs. Now, certification would only be required for those foreign pests not yet present in the United States and declared to be of concern here, and the domestic ones for which official control programs are being implemented. As pests are removed from the excluded list and entry conditions made easier, it is conceivable that the floodgates could be opened for entry of newer, more virulent strains of pests than were once regulated.

Third, because of the limited amount of planting material that is currently being imported into the country, there was no need to maintain an elaborate regulatory infrastructure for imported nursery crops. However, with the expected deluge of imports of nursery stock coming from all over the world, additional regulatory infrastructure would be needed on the domestic front. Establishing and maintaining such systems could have considerable budgetary implications.

Fourth, the WTO's SPS Agreement, by requiring scientific evidence as proof before imports can be restricted, assumes that "there is no risk in the unknown". However, as entry conditions are made easier and the United States begins trading in nursery stocks and propagating materials from non-traditional sources, there is an increased likelihood of introducing new pests and diseases. Invasive species are not necessarily pests where they are native because natural predators and parasites keep them in balance, but they can cause significant damage to agricultural systems and native

plants and animals in a new environment. Moreover, because many of these diseases are not detected immediately, this could greatly offset the short-term gains from freeing up the trade.

One possible solution that has been suggested is a move towards federal or state mandatory certification for nursery crops. Such a move would satisfy the WTO's SPS principle of non-discrimination against foreign products and preserve the United States current list of regulated pests. However, how such a system would work is not clear because a federal mandatory certification program model does not currently exist in the United States (Kreith and Golino, 2003). As these authors contend, it is conceivable that many nurserymen and growers might consider such an idea to be intrusive. Also, enforcing mandatory programs would require substantial additional funds far in excess of what is spent on the current system.

### **Concluding Remarks**

Undoubtedly, freer trade can lead to unrealized benefits for a country. However, when trading live organisms, particularly where such organisms are not destined for food or feed, the underlying assumption of perfect knowledge does not hold, and the potential gains from trade are questionable. Live organisms can reproduce, escape and become invasive, causing damage to the surrounding environment. In addition, they can harbor damaging pathogens that are not easily detected, compounded by the fact that it often takes time before the full impact of the damage is realized. Hence, the extent of the uncertainties surrounding the spatial and temporal outcome of such trades makes computing the potential gains, at best, an educated guess.

The SPS Agreement recognizes the importance of a country protecting its resources. However, the Agreement in its zeal to stamp out unfair trading practices associated with the use of SPS measures, and by insisting on scientific proof of a disease threat has also taken away the freedom of countries to exercise their prerogative to determine the level of risk they are willing to take—science was never meant to provide definitive proof. Thus, the Agreement might inadvertently be contributing to the spread of damaging pests and diseases by weakening national safeguarding mechanisms in an era of increased global trade of agricultural commodities and the movement of people. As always, a country’s first line of defense for and the most cost effective approach to combating invasive species is to keep them from becoming established in the first place. If the benefits of free trade are to be preserved, then necessary steps must be taken to limit the detrimental impact—even if this means restricting freer trade to only certified planting materials.

## References

- Food and Agricultural Organization (FAO). 2001. *The state of food and agriculture 2001*. Rome, Italy. <http://www.fao.org/docrep/003/x9800e/x9800e14.htm>.
- Foster, J.A. 2000. Free Trade and the American Fruit Industry. <http://fpms.ucdavis.edu/FreeTradeArticleJAFoster.pdf>.
- James, S., and K. Anderson. 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). Can one make the SPS Agreement work for small economies? Paper presented at the 24th West Indies Agricultural Economics Conference, Grenada West Indies (July 9-12).
- Kreith, M., and D. Golino. 2003. Regulatory Framework and Institutional Players. In *Exotic Pests and Diseases Biology and Economics for Biosecurity*, edited by D. Sumner. Ames, IA: Iowa State University Press.
- McNeely, J.A. 1999. An Introduction to Human Dimensions of Invasive Alien Species. In *The Great Reshuffling: Human Dimensions of Alien Invasive Species*, edited by J. A. McNeely, pp 5–22. Gland, Switzerland: IUCN Publishers.
- Roberts, D. 1998. Implementation of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures. Economic Research Service/ USDA. Agriculture in the WTO/WRS-98-44. Washington, D.C.
- USDA Briefing Room. 2003. <http://www.ers.usda.gov/briefing/invasivespecies/indemnities.htm>
- USDA. 2003. Floriculture and Nursery Crops Situation and Outlook Yearbook. Market and Trade Economics Division, Economic Research Service, U.S. Department of Agriculture, FLO-2003. Washington, D.C. (June).
- World Trade Organization (WTO). 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.