

# End Runs Around Trade Restrictions: The Case of the Mexican Tomato Suspension Agreements

*by*

**Kathy Baylis and Jeffrey M. Perloff**

*A voluntary bilateral trade agreement caused a reduction in Mexican exports of tomatoes to the United States. However, diversion of exports to and from other countries reduced the effect of this agreement on tomato consumption and prices within the United States. □*

**A**t the urging of U.S. tomato producers, the United States negotiated a voluntary price restraint (VPR) on fresh tomato imports from Mexico starting in 1996. This voluntary floor price on Mexican fresh tomato exports met the U.S. producers' objective of blocking some tomato exports when prices were low. Did the U.S.-Mexico voluntary floor price on fresh tomato exports from Mexico to the United States result in reduced shipments to the United States? Did it cause major trade diversions to other countries and to the processing sector? Were these diversions significant enough to largely offset the effect of this bilateral trade barrier? To answer these questions, we examine the effect of this bilateral trade barrier on fresh tomato trade flows among the United States, Mexico, Canada, and the rest of the world and to the Mexican processing sector.

We find that the diversion effects of the VPR are large—representing nearly three-quarters of the direct effects of the trade barrier. When the VPR was binding, Mexico exported more tomatoes to Canada, while Canada and the rest of the world increased their exports to the United States. The VPR also caused fresh tomatoes in Mexico to be diverted into paste production, which was exported to the United States.

## Background

Tomatoes are an important product in the three North American Free Trade Agreement (NAFTA) countries: the United States, Canada and Mexico. Each country exports to and imports from each of the other two countries. Mexico accounts for 83 percent of U.S. imports of fresh tomatoes, and Canada is responsible for nine percent of U.S. imports. The vast majority of all U.S. fresh tomato exports go to Canada (91 percent of 1999 exports), while U.S. exports to Mexico (four percent) rank a distant second. Figure 1 illustrates the flow of tomatoes within North America.

Florida and Mexico historically compete for the U.S. and Canadian winter and early spring markets. Over the past ten years, Mexico has increased its

market share of the U.S. winter tomato market from 27 percent to close to 50 percent.

Most of the Mexican tomatoes enter the United States at border crossings in Laredo, Texas; Nogales, Arizona; or San Diego, California. The price for most tomatoes is established by contracts with distributors before the tomatoes enter the United States. Other truckloads of tomatoes are sold at the Phoenix market where they are bought by distributors, retailers and shippers, who in turn sell them at regional terminal markets throughout the United States. If the market in Phoenix cannot accept all the tomatoes at the reference price, shippers often wait for a few days in hopes that the price will rise. Their ability to hold the tomatoes is limited, since tomatoes need to be sold at retail within two to three weeks after shipping. If the tomatoes are nearly ripe and still cannot be sold in the Phoenix market, they are either sent back to Mexico to be turned into paste or they are destroyed.

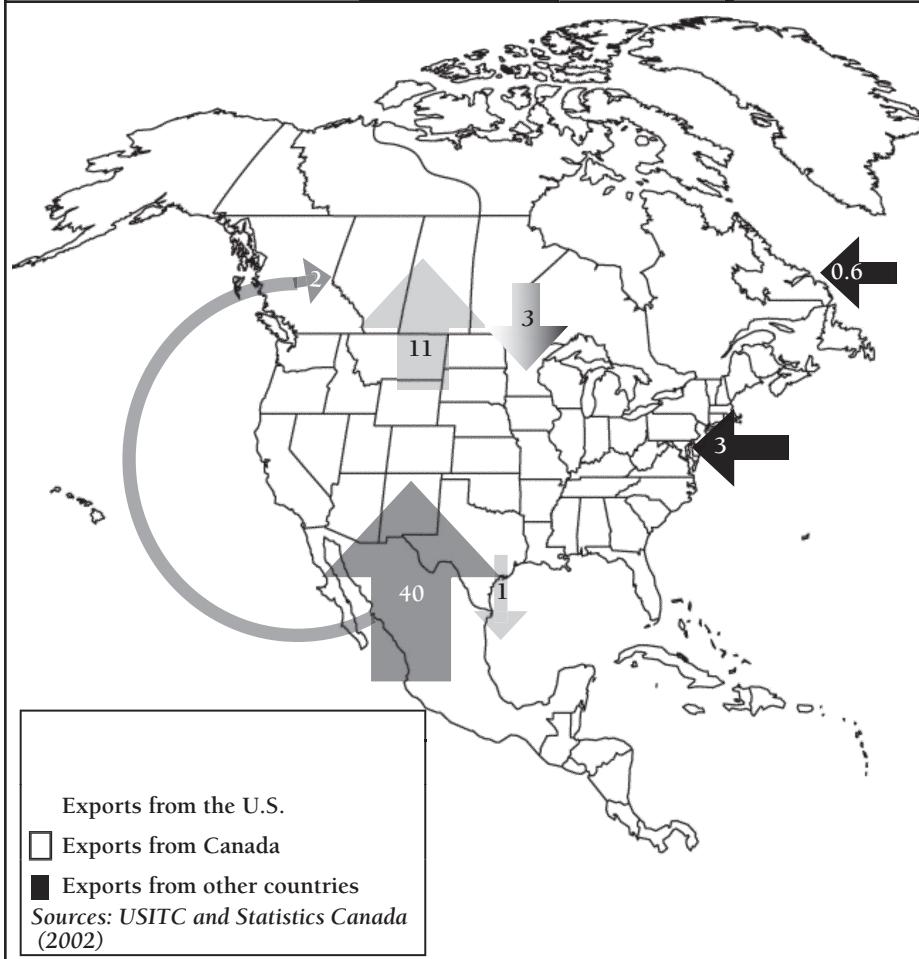
Close trade ties in a sensitive agricultural product among the three countries have, perhaps predictably, led to repeated trade disputes. In the 1980s, Florida producer groups brought an anti-dumping case against Mexican winter vegetable production. The



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*Courtesy of USDA Agricultural Research Service Library*

**Figure 1. Average Annual Exports within and to North America, 1989-2001: 1,000 Tonnes (Metric Tons)**



U.S. International Trade Commission (USITC) did not find evidence of dumping and the case was dropped, but tension between Floridian and Mexican producers continued. On April 1, 1996, various U.S. tomato growers (primarily Florida growers) filed an anti-dumping petition, alleging that their industry was threatened by fresh tomatoes from Mexico imported "at less than fair value." The petition was in response to a 276 percent rise in tomato imports from 1992 to 1996, the bulk (93 percent in 1996) of which came from Mexico. U.S. production fell 21 percent over the same period, and U.S. domestic prices dropped from \$0.79 per kg. to \$0.63 in 1996.

In May 1996, the Department of Commerce found that tomato imports threatened the domestic industry with material injury, the first step in setting supplemental anti-dumping tariffs to protect the U.S. industry. On December 6, 1996, the United States and Mexico reached a "suspension" agreement where Mexico would voluntarily limit its exports and, in

return, the United States would suspend the anti-dumping case and remove the anti-dumping tariffs. Mexico agreed to set a reference (floor) price of \$0.21 per pound of tomatoes exported to the United States. For the suspension agreement to hold, producers representing 85 percent of the exports had to agree to be bound by the minimum. In 1998, separate winter and summer reference prices were set. Until July 2002, summer tomatoes (primarily produced in Baja, Mexico) were covered under one reference price of \$0.17 per pound that ran from July 1 to October 22, while winter tomatoes (affecting tomatoes produced in Sinaloa) were covered October 23 to June 30, with a higher floor price of \$0.21 per pound.

In July 2002, the suspension agreement was repealed after a number of Mexican tomato shippers refused to renew their commitment to the reference price agreement. The end of the suspension agreement

re-initiated the 1996 anti-dumping case, and the Department of Commerce resumed its investigation. The two countries entered into a new suspension agreement in December 2002, which remains in effect. (Our analysis covers the effect of only the initial suspension agreement.)

### Statistical Model

We used a statistical model to assess the contribution of many factors in determining the quantities shipped between NAFTA countries. Factors we examined included weather (temperature and rainfall), prices of inputs (fertilizer, chemicals, labor), tariffs, the VPR, seasonal differences (having to do with how growing seasons vary across regions), prices relative to the VPR price floor, gross domestic product of each country, exchange rates and others.

If they cannot sell their fresh tomatoes at a high enough price, Mexican firms convert some fresh tomatoes into paste, which they ship to the United

States, so we separately examine the factors that determine Mexican paste production. Although paste is produced primarily using winter tomatoes, paste is storable and is exported year-round.

According to our statistical model, the VPR statistically significantly affected trade between the various pairs of countries. To determine whether the effects on tomato sales in the United States were large, we conducted two simulation experiments, as shown in Table 1. The first column reports the average change in the thousand tonnes (metric tons) of tomatoes shipped during the period in which the VPR was in place. The second column expresses the quantity change in the first column as a percentage of the monthly average trade flow estimated for the periods when the policy was binding (16 percent of the time).

The direct effect of the policy was to reduce Mexican exports to the U.S. by 197.2 thousand tonnes per year. We estimate that exports would have been 32 percent higher had the policy not been in effect.

In addition to the direct effect, there were sizeable fresh tomato diversions and diversions into processing. The drop in Mexican exports to the United States was partially offset by shipping 5.9 thousand tonnes more tomatoes from Mexico to Canada (22 percent of normal shipments) and converting 18 thousand tonnes (fresh equivalent) into paste, which were exported to the United States, so that net Mexican exports fell by 173.3 thousand tonnes (12 percent was diverted to Canada or into paste).

The drop in U.S. imports from Mexico was largely offset by increased imports of 161.8 thousand tonnes of fresh tomatoes from Canada and the rest of the world. In total, 75 percent of the direct effect was offset by this indirect effect. If we include the paste, then 84 percent of the drop in fresh tomato exports from Mexico to the United States was offset by diversions.

Given that domestic U.S. tomato consumption is slightly over two million tonnes, the direct reduction in Mexican imports would have caused prices to increase by 18 percent. However, because of the diversion of extra fresh tomatoes to the United States,

**Table 1. Annual Effects of the Voluntary Price Restraint**

|  | Change in<br>1,000 Tonnes | Percent |
|--|---------------------------|---------|
|  |                           |         |

<sup>a</sup> Percentage of average shipments during the years when the VPR was in effect.

<sup>b</sup> Percentage of direct Mexican exports to the United States.

we estimated that the price increase would have been only four percent. Indirect supporting evidence of this mitigation effect is that the average farm-level price rose by only two percent from the period before the VPR (1988-1996) to the period when the VPR was in effect (1997-2002).

## Summary

We find that the U.S.-Mexico VPR not only had direct effects on trade between the United States and Mexico, but that the resulting increased shipments from Canada and other countries were substantial and sharply reduced the protectionist effect of the border measure in the United States. Further, the VPR on the raw product encouraged Mexico to process the tomatoes and export them to the United States, which increased the competition to the United States' processors.

Kathy Baylis is an assistant professor in the Food and Resource Economics Group on the Faculty of Agricultural Sciences at the University of British Columbia. Jeffrey M. Perloff is a professor in the Department of Agricultural and Resource Economics at UC Berkeley. He can be reached by e-mail at [perloff@are.berkeley.edu](mailto:perloff@are.berkeley.edu).