



Economic Impacts of Losing the Fruit Fly Trapping Program

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Introduction

Mexican fruit fly infests parts of Mexico and Central America. Oranges and grapefruit are susceptible to infestation and economic losses result from direct damage caused by the larvae feeding on the fruit pulp (USDA). Since 1986, Texas has participated in the Fruit Fly Trapping and Control Program. The program has been jointly funded by the Animal and Plant Health Inspection Service, USDA, the Texas Department of Agriculture and the Texas Valley Citrus Committee. A multi-phased program was initiated in 2007 to eradicate the fruit fly from Texas and the Mexican state of Tamaulipas. The program is now in its final phase, with bait spray, trapping and the release of sterile flies all critical elements necessary to monitoring and control of the pest.

Industry experts estimate that the loss of the fruit fly trapping program would result in major crop losses and price reductions for Texas fresh citrus. Fumigation of fruit would increase the cost of production, result in price discounts due to chemically burned and pitted fruit, and also result in the loss of both domestic and export markets. Citrus shipments would also be reduced due to lack of fumigation capacity, which is limited by the number of chambers presently available, the cost of constructing new ones and a lengthy approval process due to environmental considerations. It is estimated that six new fumigation chambers would be required to fumigate the entire crop, with total construction costs reaching \$750,000.

The economic impacts of the loss of the fruit fly trapping program on the Texas commercial fresh citrus industry were estimated using IMPLAN, an economic input/output model. Economic multipliers for each sector of the economy were used to estimate how a reduction in citrus sales affects business activity, income and employment in other sectors of the economy that supply inputs and services to the citrus industry.

Current Situation and Economic Baseline

Texas commercial fresh market citrus production was valued at \$86 million in 2010. The fresh market grapefruit crop was valued at \$59.3 million, while the orange crop was \$26.7 million. Texas citrus production is located in the Lower Rio Grande Valley, with Hidalgo county accounting for about 85 percent of Texas bearing acres in 2008. Texas is the third largest citrus producing state behind Florida and California.

IMPLAN estimates indicate that total business activity required to support Texas citrus production is \$189 million annually. This includes farm level business activity of \$86 million and off-farm business activity of \$103 million. Farm and related sector value added, or income, generated by citrus production is \$39.6 million, while another \$57.7 million is generated off-farm in input supply, transportation, finance, real estate, health care, wholesale/retail trade and the food/beverage industry. The Texas fresh citrus industry employs directly or indirectly 5,919 people. Employment used to produce and market the Texas fresh citrus crop is estimated to be 3,737 jobs. Of those, 2,968 are farm jobs, while off-farm citrus related jobs are 769, including sorting, grading and packing, and input supply. The balance of employment, or 2,182 jobs, is located in other sectors including health care, 354 jobs; food, beverages and retail, 564 jobs; wholesale, transport and warehousing, 233 jobs; business services, 289 jobs; finance, 145 jobs; and all other sectors, 597 jobs.

Significant purchases of goods and services associated with the Texas citrus industry are dispersed over many sectors of the economy. Business activity associated with the most important supporting sectors includes: agriculture support activities, \$18.1 million; wholesale trade, \$6.9 million; real estate, \$12.6 million; and transportation, \$2.8 million. Health care services at \$7.0 million, food and beverage sales at \$3.6 million, and insurance and banking services at \$11.7 million are supported by household purchases attributed to economic activity associated with Texas citrus production.

Potential Economic Impacts of Eliminating the Fruit Fly Trapping Program

Termination of the fruit fly trapping program is estimated to result in a \$37.4 million annual loss to the Texas fresh citrus industry. Losses in fresh citrus sales are estimated to reach \$17 million. These sales losses would be accompanied by an additional loss of \$20.4 million in associated economic activity required to produce and market the crop. A total of 1,168 jobs would no longer be required to support the Texas fresh citrus industry. Of these, 586 would be in citrus production and 582 in agriculture services, finance, business, health care, transportation, wholesale/retail trade and food/beverages.

If fumigation is adopted as an alternative, there would be a \$22.3 million loss due to price discounts up to 30 percent for chemical burns and pitted fruit. About \$10 million of that is lost sales, while \$12.3 million represents reduced purchases of production inputs such as fertilizer and chemicals, other agriculture services such as harvesting, sorting, grading and packing, financial services, real estate, health care, transportation and wholesale/retail trade.

Additional losses of \$7.7 million occur due to lost markets in California and Arizona. Buyers are reluctant to purchase fruit if it has been fumigated with methyl bromide, currently the only viable treatment for fruit fly. Direct sales losses would be \$3.5 million, while associated losses in other economic activity would be \$4.2 million. A loss of 240 jobs is attributed to lost sales in the California and Arizona markets. These job losses are about evenly split between farm and non-farm sectors.

Losing export markets in Europe and Japan would result in a \$3.0 million loss to the industry. Fumigated fruit are not accepted in these countries. About \$1.4 million loss is the result of lost sales, while another \$1.6 is lost business activity due to reduced input purchases and services. Export related job losses total 94, with 47 of those on the farm.

Organic citrus production would experience a \$4.4 million loss if fumigation were required due to loss of the market and lack of viable alternatives. These losses include \$2.0 million in sales and an additional loss of \$2.4 million in business activity that would result from lower purchases of agricultural and financial services, health care, real estate, transportation, wholesale/retail trade and food processing. Losses in employment are estimated to be 138, with both non-farm job losses and farm job losses at 69 each.

Summary

The Texas fresh citrus industry and the Lower Rio Grande Valley would experience economic losses of \$37.4 million annually if the fruit fly trapping program is eliminated. In addition, 1,168 jobs would no longer be needed to produce and market the crop. About one-half of these economic and job losses would be off-farm in agricultural services, finance, real estate, health care, wholesale/retail trade, transportation and food/beverages.

Prepared at the request of Texas Citrus Mutual. For further information, please contact Parr Rosson, Extension Economist and Director, Center for North American Studies, Department of Agricultural Economics, Texas A&M University, College Station, Texas 77843-2124. Telephone 979-845-3070 or e-mail prosson@tamu.edu. Contributing to this report were Flynn Adcock, International Program Coordinator, Dan Hanselka, Extension Program Specialist, Marco Palma, Extension Economist-Horticultural Marketing, Luis Ribera, Extension Economist-Management. Utilization data provided by Texas Valley Citrus Committee.