



*Agribusiness, Food, and Consumer Economics
Research Center*

Mission

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Mission Statement

- Provide high-quality, objective, and timely research to support strategic decision-making at all levels of the supply chain from producers to processors, wholesalers, retailers, and consumers.
- From the fields of producers...to the plates of consumers.
- Through research, educational programs, and industry collaboration, we wish to be the leading institution in addressing issues dealing with the U.S. food and fiber sector.

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AFCERC is a part of the Texas A&M University System,
College Station, TX



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Logistics Analysis of the Pathogen Control Provisions of the Almond Marketing Order

By Dr. Victoria Salin, Texas A&M University

To be Discussed

- Introduction and Background
- Pathogen Control and the Market for Treatment Services
- Supply, Demand, and Pricing of Almonds
- Least-Cost Treatment Logistics Plan
- Results of Logistics Analysis
- Conclusions

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Introduction and Background

- Increased production over last decade
- Threats to the almond industry
 - 2003 & 2005 salmonella outbreaks
- The Salmonella Control Action Plan (2007)

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Pathogen Control and the Market for Treatment Services

- The Almond Board of California (ABC)
- Why use pathogen control
- Types of pasteurization processes

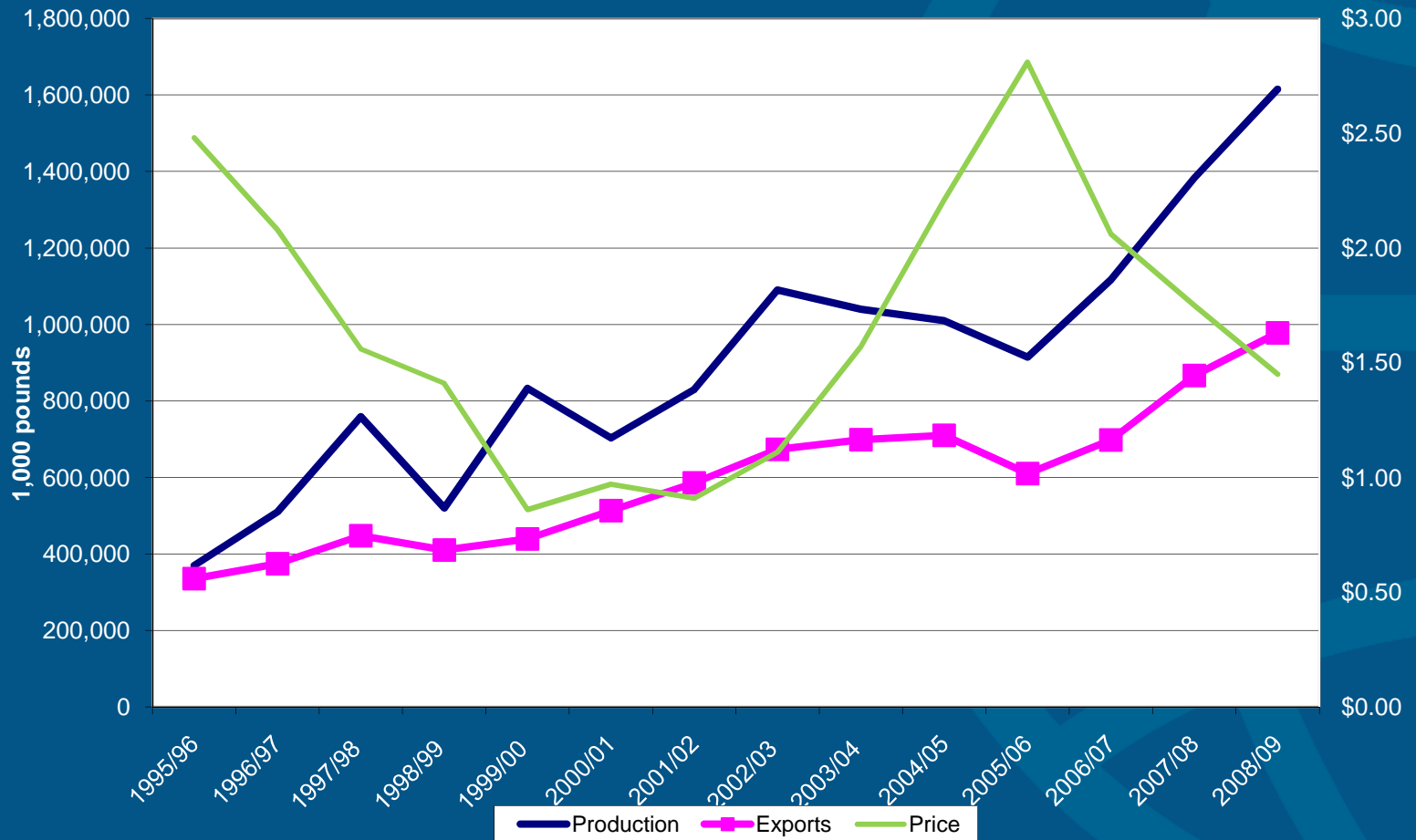
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Supply, Demand, and Pricing of Almonds

- Growth of almond production
- Increased exports by 37.78% over the past five years

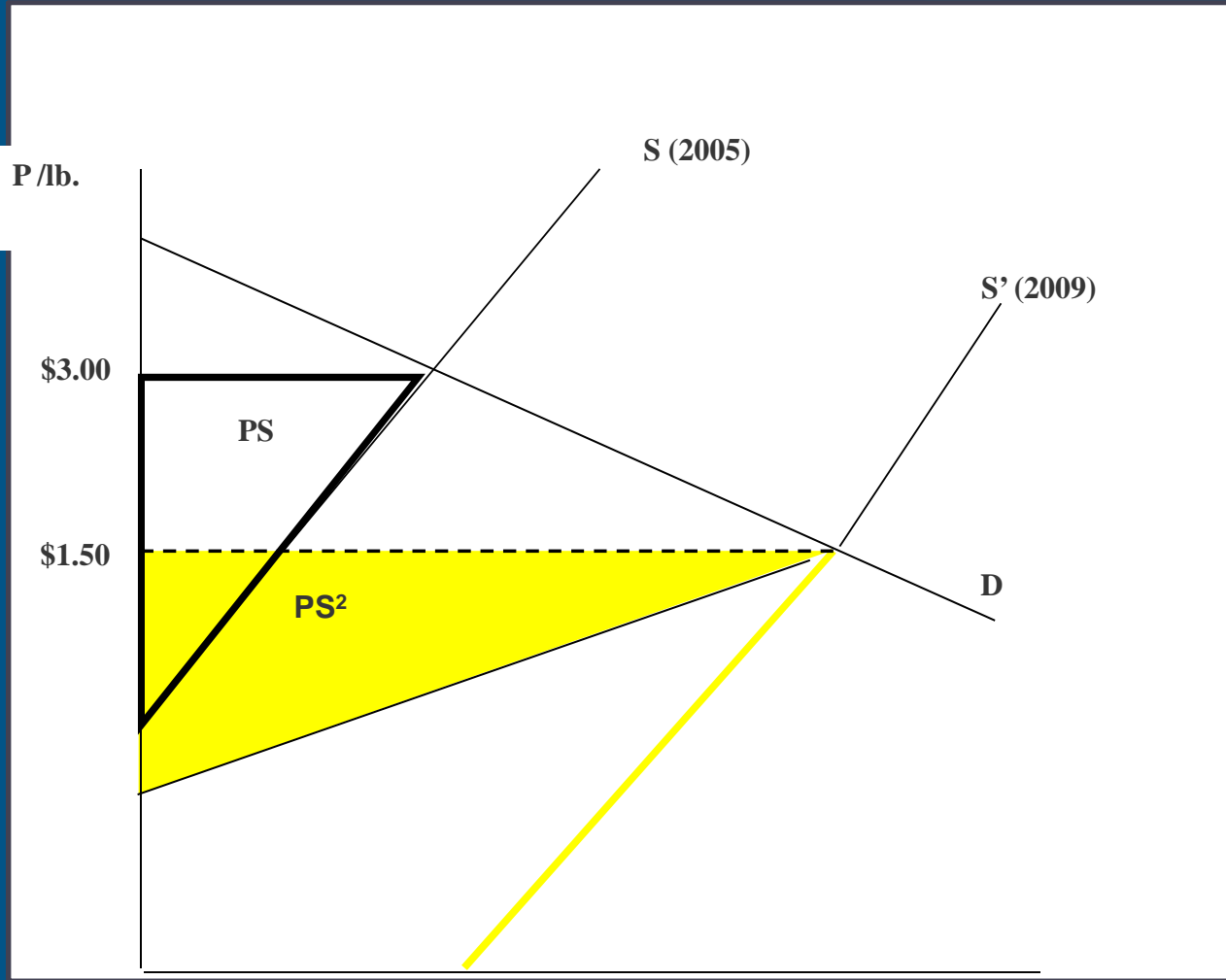
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Growth in almond production and exports, 1995-2008



Source: NASS. 2008/09 is forecast. \$ values are farm price per pound.

Producers' Surplus and decreasing grower price of almonds



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Least-Cost Treatment Logistics Plan

- What is the least-cost logistics plan
- Main objects of logistics plan
- Explanation of the Linear Programming model
- The total cost associated with Action Plan estimated \$28 million per year.
- Explanation of cost breakdown
- Capacity for pathogen-reduction in almonds more than adequate
- Development of more treatment locations
- Fuel price analysis

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Conclusion

- Marketing order authority leveraged for food safety
- Other nut crops facing salmonella problems
- Success of Salmonella Control Action Plan (2007)
- Future technological advances in pasteurization

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