



# PISTACHIOS

## 1,000 ACRES

### CASE STUDY

## CONTACT US

---

Tel : (503) 329-8120  
[info@OnTargetSpray.com](mailto:info@OnTargetSpray.com)  
[OnTargetSpray.com](http://OnTargetSpray.com)



# Background

In California, managing pest control for 454,000 acres of pistachios poses significant operational and environmental challenges.

## Growing pains currently facing air-blast sprayers.

- ▶ Labor shortages
- ▶ Fuel prices
- ▶ Increased regulation
- ▶ Tank refill time
- ▶ Water use efficiency

This leads to higher costs and time-intensive applications.

In contrast, OnTarget sprayers offer a modernized approach designed to **optimize resources, improve efficiency,** and **enhance environmental stewardship.**

1,000 Acres- One Season Comparison		Air Blast	OnTarget Sprayer
Sprayer Tank Size	(Gallons)	600	600
Ground Speed While Spraying	(Miles Per Hour)	2.5	2.75
Water Used Per Acre	(Gallons)	150	40
Row Width	(Feet)	20	20
Boom Configuration	(# of Rows)	1	1
Fuel Consumption	(Gallons Per Hour)	6	3
Percentage of Label Rate Actually Used	(% Per Acre)	100%	100%

Trial Operation		
Average Spray Applications Per Season	#	10
Cost of Fuel	(\$ Per Gallon)	\$4.5
Cost of Material	(\$ Per Acre)	\$75
Cost of Labor	(\$ Per Hour)	\$22
Field Size	(Acres)	1,000
Percentage of Label Rate Actually Used	(Acres)	100%

Total savings with OnTarget Sprayers:

**\$107,320**



## Time


Air Blast     **4,350 Hrs**

OnTarget   **2,135 Hrs**

**2,215 Hours Saved**

## Water

Air Blast     **1,500,000 Gallons**

OnTarget  **400,000 Gallons**

**1,100,000 Gallons Saved**

## Fuel

Air Blast     **\$83,520**

OnTarget  **\$24,930**

**\$58,590 Saved**

## Material

Air Blast   **\$750,000**

OnTarget   **\$750,000**

**\$0 Saved**

## Labor

Air Blast     **\$95,700**

OnTarget   **\$46,970**

**\$48,730 Saved**



## Time Savings Details

	Air Blast Sprayer	OnTarget Sprayer
Time Per Row	6.7 Minutes	5.5 Minutes
Time Required to Spray Field Once	184.3 Hours	151.3 Hours
Tank Fills Required to Spray Field Once	250	67
Time Required to Fill Tank Once	30 Minutes	30 Minutes
Total Fill Time	125 Hours	33.5 Hours
Acres Sprayed Per Hour	3.2 Acres/Hr	5.4 Acres/Hr
Acres Per Tank	4 Acres/Tank	15 Acres/Tank
Total Time Spent Filling Per Season	1,250 Hours	335 Hours
Total Time to Spray Field Once, Including Filling	309.3 Hours	184.8 Hours
Total Time Spraying	3,100 Hours	1,800 Hours



## Water Savings Details

	Air Blast Sprayer	OnTarget Sprayer
Sprayer Tank Fills Required	250	67
Water Required for One Field Pass	150,000 Gallons	40,000 Gallons



## Fuel Savings Details

	Air Blast Sprayer	OnTarget Sprayer
Gallons of Fuel Required for Field	1,856 Gallons	554 Gallons
Cost of Fuel Per Acre	\$8.35	\$2.49
Total Cost of Fuel for One Field Pass	\$8,352	\$2,493
Total Acres Sprayed Per Season	10,000 Acres	10,000 Acres
Total Cost of Fuel Per Season	\$83,520	\$24,930



## Material Savings Details

	Air Blast Sprayer	OnTarget Sprayer
Total Acres Sprayed Per Season	10,000 Acres	10,000 Acres
Average Material Cost Per Season	\$750,000	\$750,000



Case study

Pistachios  
**1,000**  
Acres





# Make the Switch™

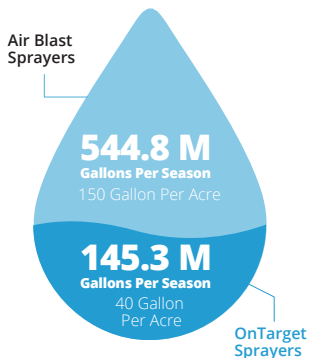
Unlock Massive Savings  
for the California  
Pistachio Industry!



01

## Water Savings

**399.5 M**  
Gallons Saved  
Per Season

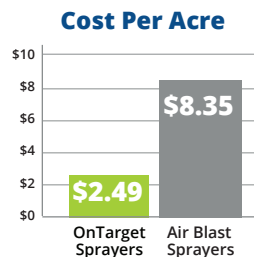


02

## Fuel Efficiency

**\$20.1 M**  
in Fuel Costs

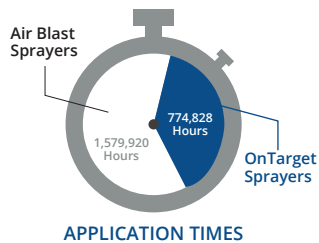
This reduction minimizes emissions and operational expenses, directly benefiting both the environment and the bottom line.



03

## Labor Reduction

**805,092**  
Hours Saved  
Per Season



**\$16.1 M**  
Savings

04

## Overall Cost Savings

**\$36.2 M**  
Per Season

These savings demonstrate the financial viability and operational benefits of transitioning to OnTarget technology.







# Conclusion:

## The OnTarget Transformation

---

By switching to OnTarget sprayers, California pistachio growers can drastically reduce resource consumption and improve cost-efficiency while meeting sustainability goals. This transformative change not only supports environmental objectives but also enhances operational scalability and financial savings, making OnTarget sprayers an invaluable tool for modern pistachio farming.

**TRY IT  
FOR  
FREE!**

### **OnTarget Spray Systems**

395 South Main Street  
Mt. Angel, OR 97362  
Ph.: (503) 996-1101  
Cel: (503) 329-8120  
[Willie@OnTargetSpray.com](mailto:Willie@OnTargetSpray.com)  
[www.OnTargetSpray.com](http://www.OnTargetSpray.com)

### **We extend our sincere gratitude to the following contributors to this case study:**

- The Nebraska Tractor Test Laboratory for their rigorous testing and data.
- All the growers and clients using Air Blast and OnTarget Sprayers for their valuable feedback and real-world applications.
- Researchers at USDA ARS and UC ANR for confirming grower standards and providing critical validation.
- The OnTarget Sprayer calculator team for their efforts in showcasing performance differences.