



EVOCA™

**A new biofungicide for  
growers in USA**

October 2023




*EVOCA™ is pending registration. This product is not currently registered for sale or use in the United States, the EU or elsewhere, and is not being offered for sale.*

# EVOCA™ uses

(US label pending EPA approval)



Crops	Diseases	Applicant Rate pounds per acre (lbs/A)
STRAWBERRIES	Botrytis Fruit Rot - Powdery Mildew	3.00-4.45
GRAPES	Botrytis Bunch Rot - Powdery Mildew	3.00-4.45
HEMP	Botrytis - Powdery Mildew	3.00-4.45
BERRIES	Botrytis - Powdery Mildew	3.00-4.45
BRASSICA LEAFY VEGETABLES	Gray Mold - Powdery Mildew	3.00-4.45
CUCURBIT VEGETABLES	Gray Mold - Powdery Mildew	3.00-4.45
FRUITING VEGETABLES	Gray Mold - Powdery Mildew	3.00-4.45
LEAFY VEGETABLES	Botrytis - Powdery Mildew	3.00-4.45
TOBACCO	Gray Mold - Powdery Mildew	3.00-4.45
ORNAMENTALS	Powdery Mildew - Gray Mold and Blight	3.00-4.45
HERBS AND SPICES	Botrytis - Powdery Mildew	3.00-4.45

 Crops in green shaded boxes will not be registered for immediate use in California.



# EVOCA™ Product Positioning

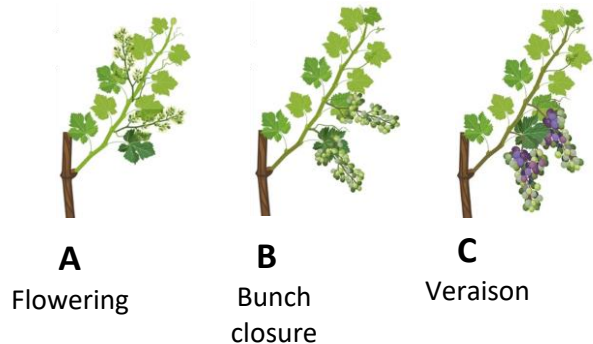


- ✔ **Preventative contact** biofungicide.
- ✔ **On grapes**, apply up to 2 (labelled for 5) times a season at 3.0 lbs/A during flowering as the foundation of an IPM program for Botrytis control to lend performance comparable to or better than conventional standards.
- ✔ **On strawberries**, EVOCA™ reduces Powdery mildew at low to moderate disease pressure, comparable to biological standards. Apply preventatively when conditions are suitable for infection, well before mycelia are visible to the naked eye. Applied up to 5 times a season at 3.0-4.45 lbs/A on strawberries and position EVOCA™ in an IPM program.
- ✔ **To avoid resistance development**  
Apply only a maximum of 2 consecutive EVOCA™ applications followed by at least two consecutive applications with specific labelled fungicides with different mode of actions in the spray schedule.
- ✔ Suitable for certification programs or “agrotourism”.

A close-up photograph of a person's hands holding a large bunch of dark purple grapes. The grapes are glistening with water droplets. The background is a blurred blue and green, suggesting an outdoor setting. The image is overlaid with a pattern of semi-transparent, overlapping circles in shades of blue and grey.

**Efficacy of EVOCA™  
Botrytis vine grapes**

# EVOCA™ shows a high and consistent efficacy on Botrytis grapevine

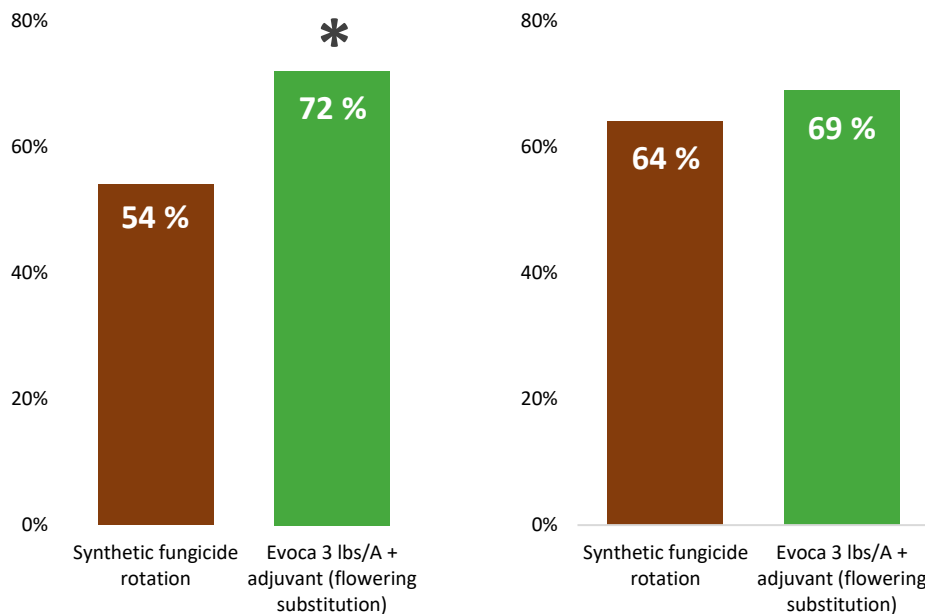


## 2021

8 trials  
Meta-analysis p-value: 0.0019

## 2022

18 trials



### Protocol and FRAC Codes

Timing	Active Ingredient(s)	FRAC
A	cyprodinil + fludioxonil	9+12
B	boscalid + pyraclostrobin	7+11
C	fenhexamid	17

	A	B	C
Synthetic fungicide rotation	9+12	7+11	17
EVOCA™ 3 lbs/A + adjuvant (flowering substitution)	F10	7+11	17

Botrytis application timings in grapevine: (A) flowering, (B) bunch closure, (C) veraison. A few trials included an optional (D) pre-harvest spray with cyprodinil + difenoconazole (3+9). Boxes show FRAC codes of the reference synthetic fungicides used in all trials. FRAC codes were rotated per best practices for resistance management. The synthetic references used are all rated 5/5 (excellent and consistent) by UC Davis for control of Botrytis in grapevine.

Percent control of harvest bunch severity, relative to untreated controls. Asterisk (\*) indicates a statistically significant difference between treatment programs. Trials conducted in California, New York and Oregon across diverse climates. Vineyards represent a range of value, premium, and ultra premium grapes. All trials were randomized complete block design small plot trials, with 6 replicates each.



### Key Finding

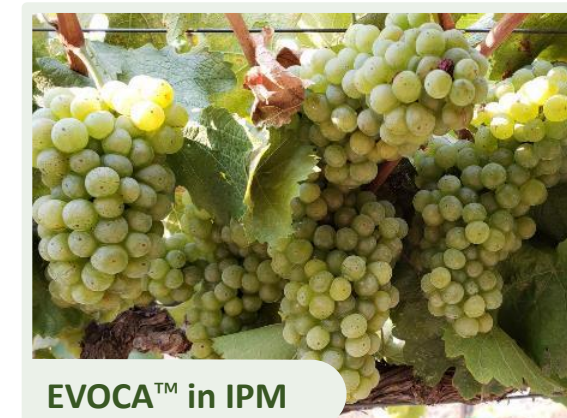
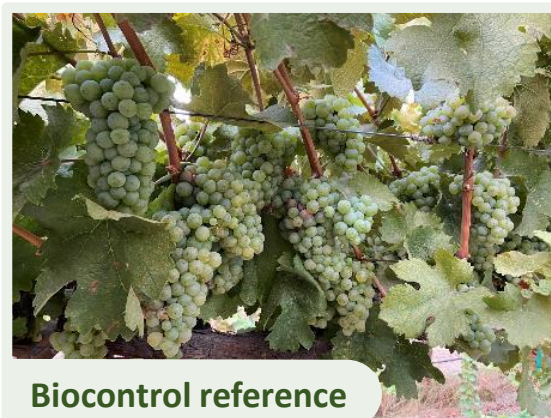
EVOCA™ provides excellent preventative control of Botrytis bunch rot in grapevines

Applying EVOCA™ at flowering offers growers a clean start as the foundation of an IPM program



# Efficacy of EVOCA™ on grapes in Independent field trials by US public institutes

Continued demonstration of performance and consistency in independent IPM programs



## Grape – Botrytis bunch rot

UC Davis Cooperative Extension

Dr. Akif Eskalen

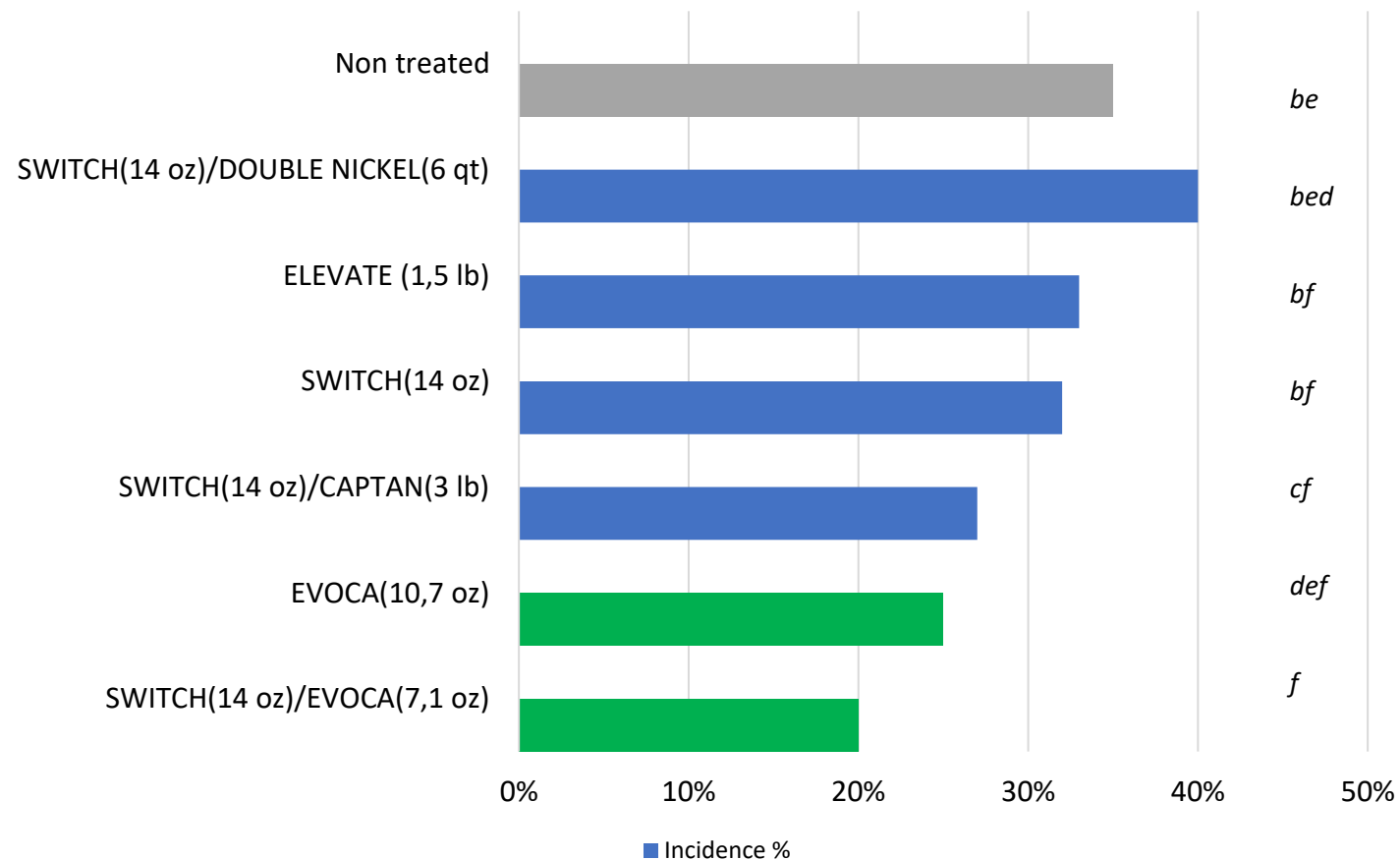


A close-up photograph of a person's hands holding a large quantity of fresh, bright red strawberries. The strawberries are glistening with water droplets and have their green leafy tops attached. The background is softly blurred, showing the person's arms and a dark-colored shirt. The overall scene is bright and natural, suggesting a farm or market setting.

**Efficacy of EVOCA™ on  
Botrytis and Powdery in  
mildew strawberry**

# Efficacy of EVOCA™ on Botrytis Gray Mold strawberry

Peak season 2020, Post Harvest evaluation 6 DAH



Report summary:

**“The only treatment with significantly less Botrytis fruit rot than the non-treated was Switch rotated with EVOCA™ at 6 days after harvest”**

- Cal Poly.

DAH = Days after harvest.

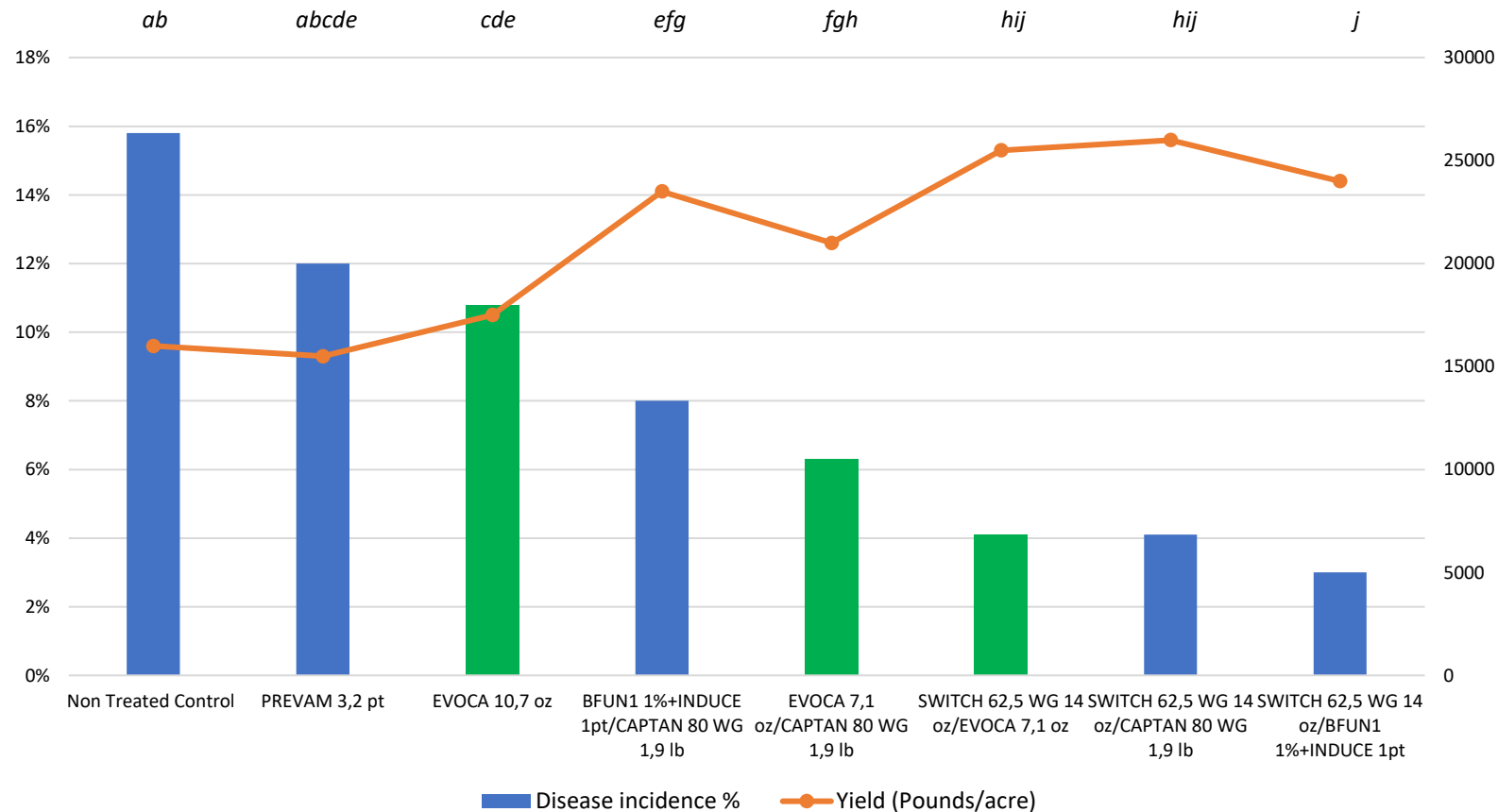
Source : Kyle Blauer, Cal Poly Strawberry Center (cv. Monterey)

[Present.pdf \(content-calpoly-edu.s3.amazonaws.com\)](https://content-calpoly-edu.s3.amazonaws.com/.../Present.pdf)



# Efficacy of EVOCA™ on Botrytis fruit rot strawberry

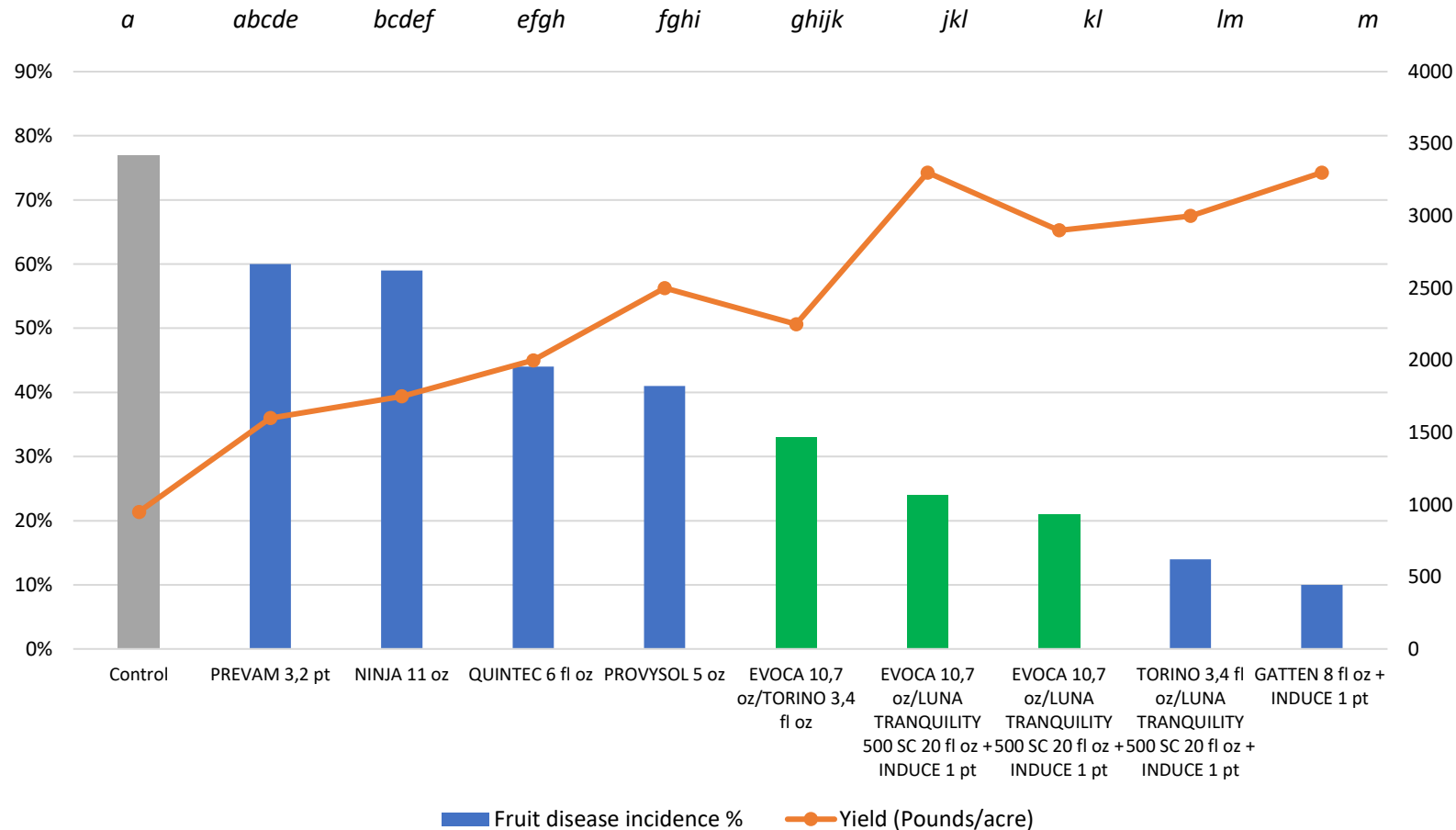
Strawberry Botrytis incidence % on fruits and marketable fruit yield – Season Average



Rotations of EVOCA™ with the synthetic fungicides provided disease incidence levels close to chemical only rotations, and improved yields over the untreated controls.

# Efficacy of EVOCA™ on Powdery mildew strawberry

Strawberry Powdery mildew incidence % on fruits and marketable fruit yield – Season Average



Rotations of EVOCA™ with the synthetic fungicides provided disease incidence levels close to chemical only rotations, and improved yields over the untreated controls.













# Evoca™: a novel tool for biocontrol



# EVOCA™ brings a higher return of investment for growers



	 <b>Full Chemical IPM</b>	 <b>Evoca™ IPM</b>	 <b>Organic*</b>
Efficacy and yield increase	●		
Quality and food safety	●		
Resistance management			●
Tox and ecotox profile	●		●
			*Evoca™ is not yet registered for organic uses.
Yield (Trays/ha)	<b>17,000</b>	<b>17,000</b>	<b>10,500</b>
Wholesale reward/Tray	<b>10 \$</b>	<b>11 \$</b>	<b>15 \$</b>
Growers sales	<b>170,000 \$</b>	<b>187,000 \$</b>	<b>157,500 \$</b>



Example based on Biotallys estimates





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