

# COMPANION PLANTING OF SUNFLOWERS IN VINEYARDS FOR PEST BIRD MANAGEMENT

2021:: Year 1





Measure the effectiveness of companion planting sunflowers in a vineyard

for minimizing damage from pest birds,

compared to labor-intensive netting of grapes



# TEAM

Joe Hannan

*Iowa State, Guide*

Kristy Walker

*Walker Homestead  
Farm and Winery*

Chris Larsen

*Compass Hill Vineyard*

John Barber

*Ottawa Vineyards*







# PLANTING PLAN

## Royal Hybrid Sunflower

- ❑ High-yielding, early sunflower, edible seeds
- ❑ Single stem/bloom height 7' flower diameter 8"
- ❑ **Space 8–12" in rows 18–36" apart, 1.5" deep**
- ❑ Plant after soils warmed to **50 degrees F.**
- ❑ Days to Bloom 68-71, Days to Seed 100-110





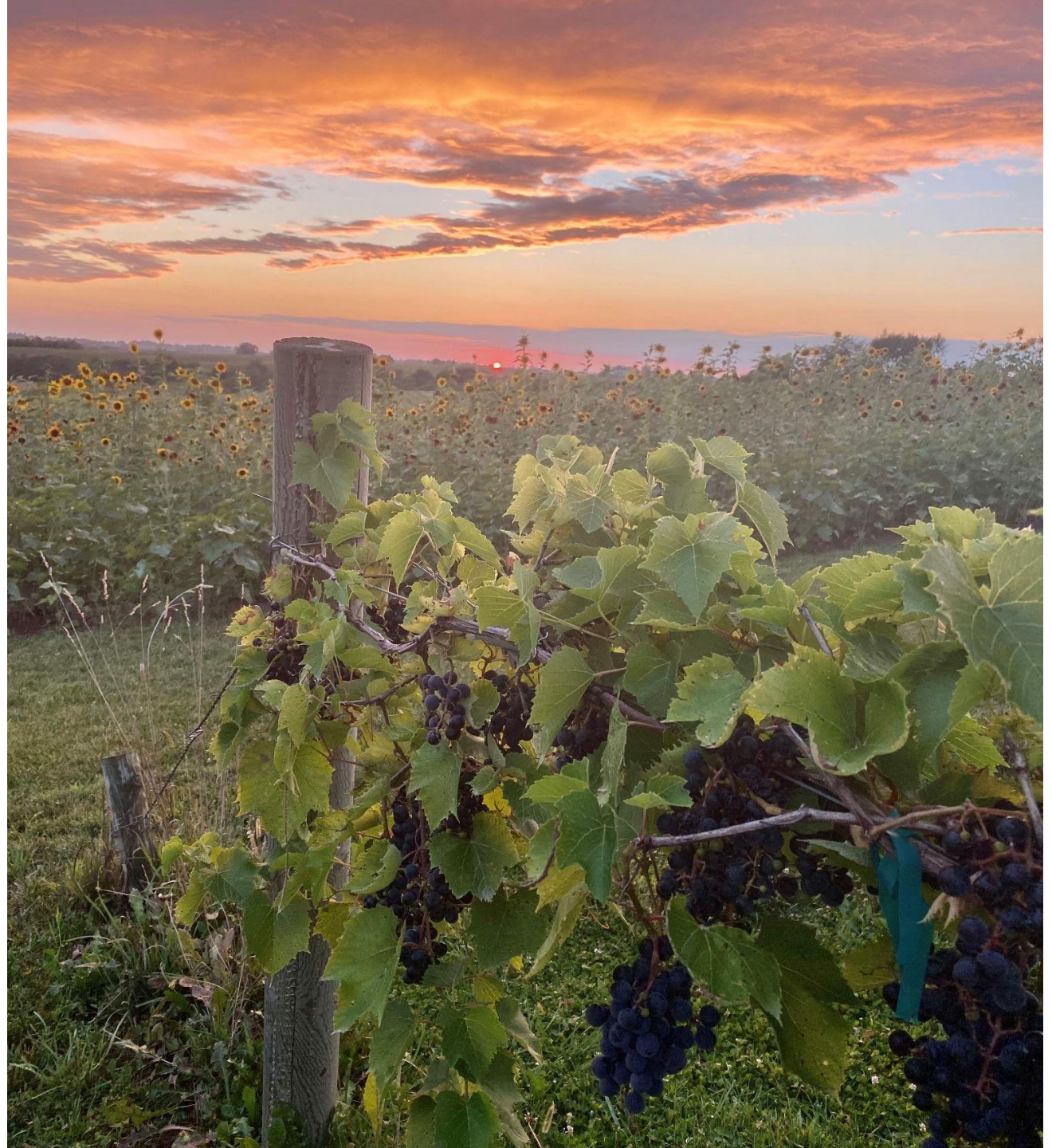
## PLANTING PLAN

Acres	.65	.45	.4
Seeds Needed	11,818	8,182	7,273
Pounds	3.9	2.7	2.4

1. Roundup/Herbicide 14 days prior to first tillage
2. Till just prior to planting after soils have warmed to **50 degrees F.**
3. Divide seeds evenly by 4 plantings every 2 weeks (i.e., May 1, May 15, Jun 1, Jun 15)
4. Plant farthest patch first
5. After sunflowers appear then post emergent of Poast/Select product (csethoxymid or clethodim) when grasses are 2-4 inches or till



# Lessons Learned







# Deer Love Sunflowers



20,000 seeds planted... 1 made it.







Need the right tools  
to manage multiple  
plantings



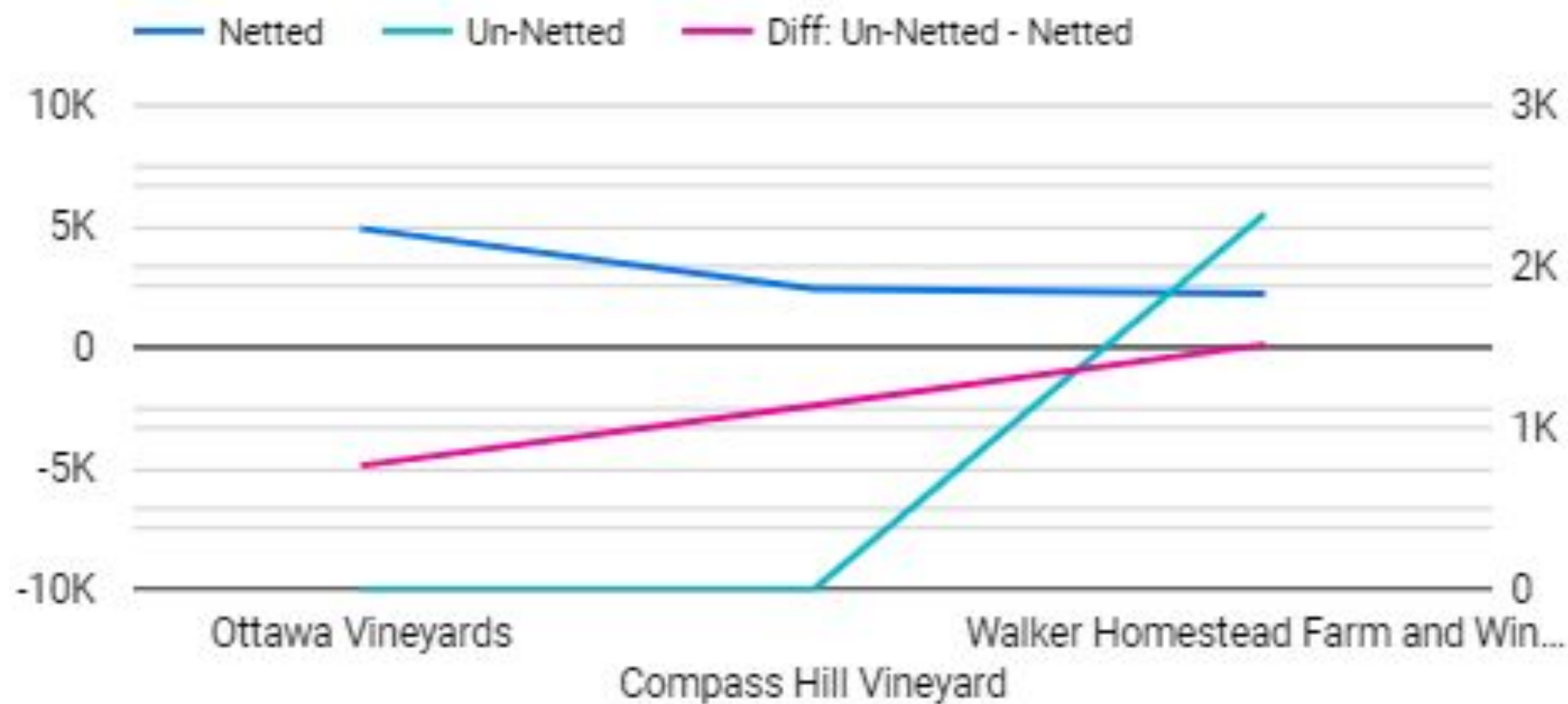


# Regardless of having fancy tools, data capture still hard

- Making time to capture data as collected
- 60 Volunteers
- Harvest Exhaustion



## Net Profit - Projected per Acre





Block 0.5 miles  
away with no  
Sunflowers





# Year 1 Profitability

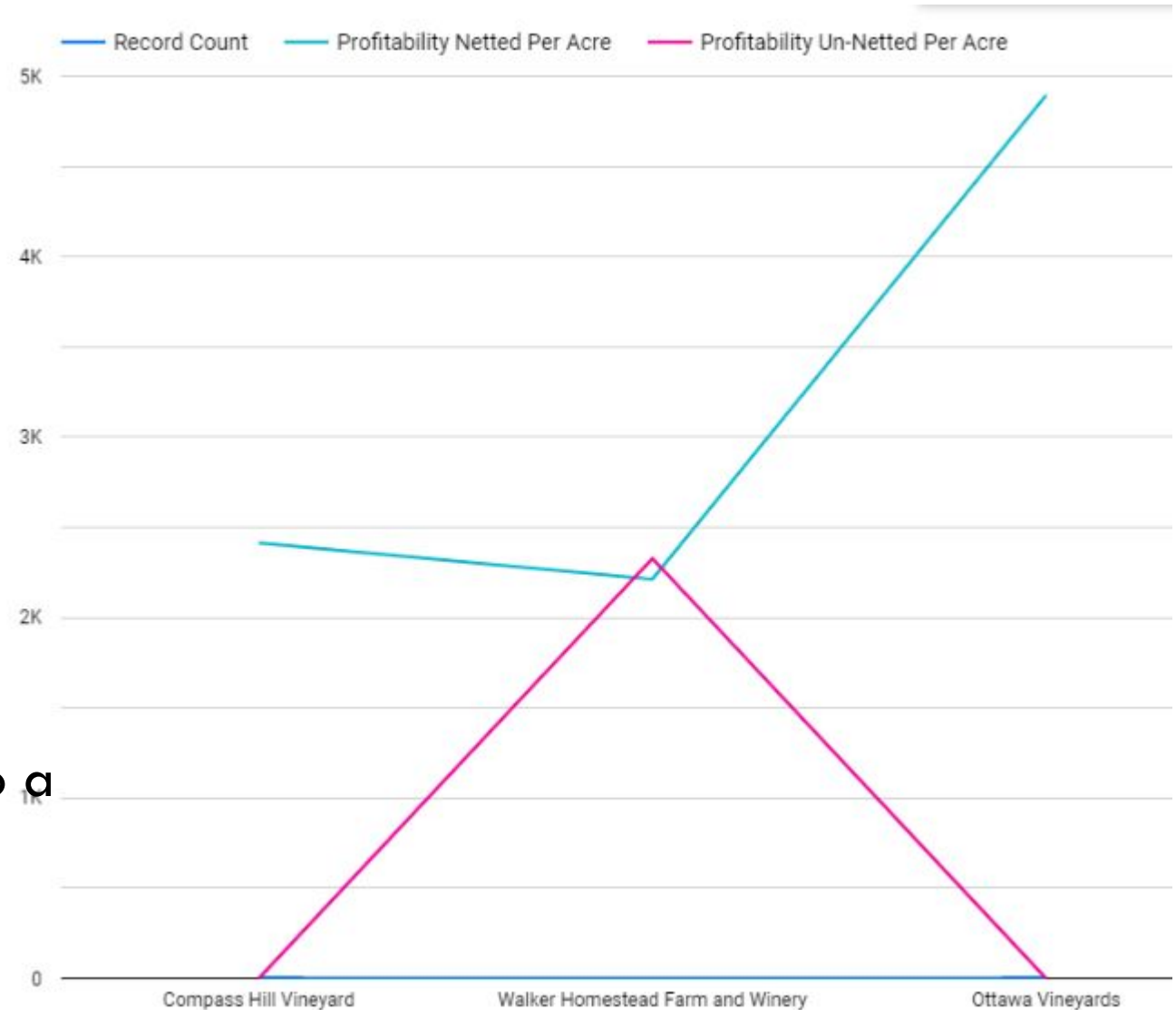
Too early to tell...

IN YEAR 2

One Farm will work on Deer  
Management

One Farm to Upgrade Equipment to  
manage multiple sunflower plantings

One Farm to do a 50% netting to do a  
better comparison.





Profitability - Netted Portion of Vineyard - Detail					
Gross Sales, Earnings, Costs, and Net Profit (Actual Results)					
	Name of vineyard ▾	Gross Sales	Labor Costs	Annual Deprec Nets	Net Profit
1.	Compass Hill Vineyard	5728	-600	-650	4478
2.	Ottawa Vineyards	6856	-540	-423	5893
3.	Walker Homestead Farm a...	181	-38	-20	123

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Gross Sales, Earnings, Costs, and Net Profit - Projected per Acre					
	Name of vineyard ▾	Gross Sales	Labor Costs	Annual Deprec Nets	Net Profit
1.	Compass Hill Vineyard	3086.95	-323.35	-350.3	2413.29
2.	Ottawa Vineyards	5695.75	-448.62	-351.42	4895.72
3.	Walker Homestead Far...	3258	-684	-360	2214

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Profitability - Un-Netted Portion of Vineyard - Detail						
Gross Sales, Earnings, Costs, and Net Profit (Actual Results)						
	Name of vineyard ▾	Gross Sales	Sunflower Earnings	Sunflower Cost - Seed Fert	Sunflower Labor Cost	Net Profit
1.	Compass Hill Vineyard	0	0	-201	-26.25	-227.25
2.	Ottawa Vineyards	0	0	-60	-270	-330
3.	Walker Homestead Farm and ...	1950	675	-48.18	-120	2456.82

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Gross Sales, Earnings, Costs, and Profitability - Projected per Acre						
	Name of vineyard ▾	Gross Sales	Sunflower Earnings	Sunflower Cost - Seed Fert	Sunflower Labor Cost	Net Profit
1.	Compass Hill Vineyard	0	0	0	0	0
2.	Ottawa Vineyards	0	0	0	0	0
3.	Walker Homestead Farm an...	1847.37	639.47	-45.64	-114	2327.51



# Survey Comments

We had timing issues but think the project should run for several years to determine its impact. We (Ottawa) need to learn how to do better planting and weed control. Tillage equipment would be nice versus relying on others during their busy time and especially when weather does not cooperate. Birds seem to be creatures of habit and they need to learn that the seeds are there, and will be in successive years.

Due to deer pressure, unable to assess this year

For a winery there are more benefits than just controlling birds. The agritourism industry provides a better tie and understanding for the population that live in the non rural areas. It seems to be a draw for people and is a nice backdrop for wedding pictures and such. but people, like the birds need to know about it through marketing and one year does not make a good measurement





# Dissemination

## PODCAST

### **Sunflowers in the Vineyard**

May 7, 2021

In this episode Joe Hannan, Iowa State University Extension and Outreach Commercial Horticulture Specialist, interviews Kristy Walker, with Walker Homestead, and discusses sunflowers used as a way to detract birds from the grapes in the vineyard.

## LINK

<https://smallfarmsustainability.libsyn.com/sunflowers-in-the-vineyard>

For questions on the project...

[kristy@walker-homestead.com](mailto:kristy@walker-homestead.com)

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FNC21-1314 "Companion Planting of Sunflowers in Vineyards for Pest Bird Management"

More to come in 2022