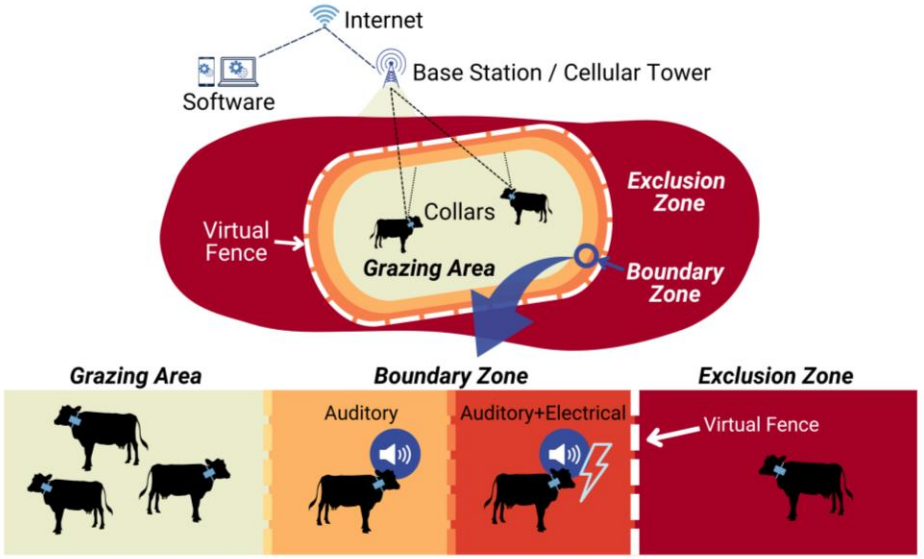
THE UNIVERSITY OF ARIZONA Cooperative Extension | THE UNIVERSITY OF ARIZONA Arizona Experiment Station | Natural Resources & the Environment

Overview of the Arizona USDA-NRCS Cost-Share program for VF

NRCS
Natural Resources Conservation Service



Credit: Amber Dalke

April 15th 2025
Window Rock, Navajo Nation

Flavie Audoin

Introduction

Payment rate offered by USDA-NRCS

Conclusion

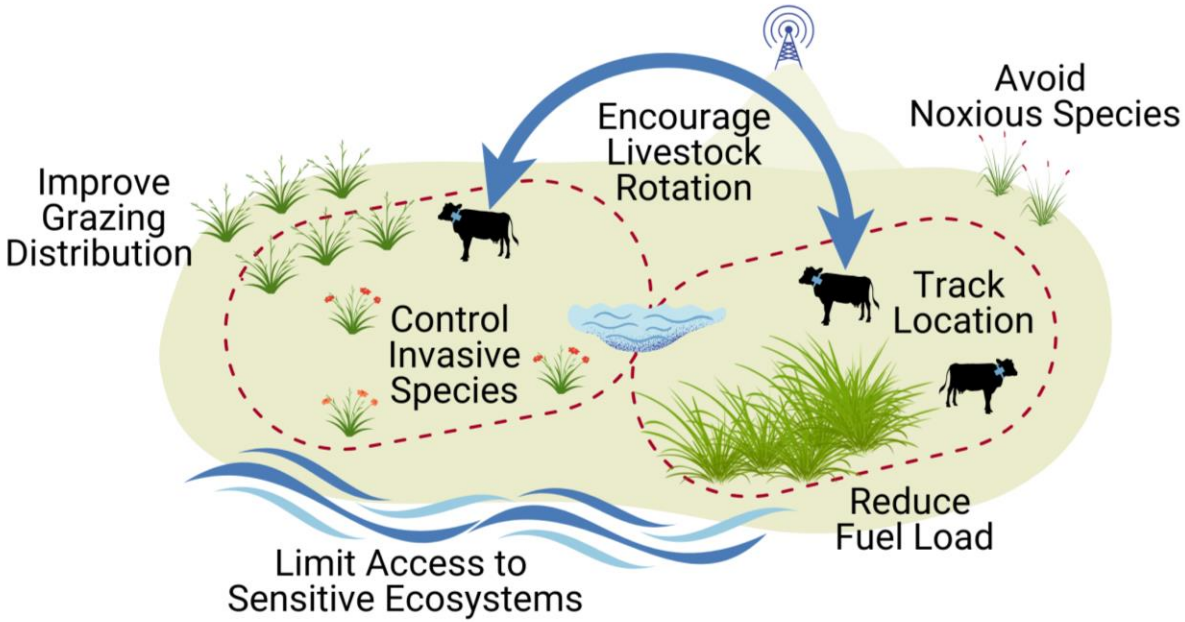
What about the USDA-NRCS Cost-Share Program?

- Virtual fence is a very expensive technology.

- **October 1st 2024:** USDA-NRCS started a financial assistance program in Arizona to help cover part of the costs of VF.
  ➔ one of the first states to have it available to livestock producers

What about the USDA-NRCS Cost-Share Program?

- Clear goals or objectives are needed to apply to that program:
  - ➔ improve grazing distribution
  - ➔ livestock rotation
  - ➔ control invasive species
  - ➔ avoid noxious species
  - ➔ reduce fuel load
  - ➔ limit access to sensitive ecosystems



Credit: Amber Dalke

What about the USDA-NRCS Cost-Share Program?

eShepherd from GALLAGHER

Cattle

Solar rechargeable

Base station or Cellular

Credit: Brian Allen

Credit: Amber Dalke

What about the USDA-NRCS Cost-Share Program?

eShepherd from GALLAGHER

Cattle

Solar rechargeable

Base station or Cellular

Halter®

Cattle

Solar rechargeable

Base station

Credit: Travis Mulliniks

Credit: Amber Dalke

What about the USDA-NRCS Cost-Share Program?

eShepherd from GALLAGHER

Cattle

Solar rechargeable

Base station or Cellular

Halter®

Cattle

Solar rechargeable

Base station

Nofence

Cattle, goat, sheep

Solar rechargeable

Cellular

Credit: Lara Macon

Credit: Flavie Audoin

Credit: Amber Dalke

What about the USDA-NRCS Cost-Share Program?

eShepherd from GALLAGHER

Cattle

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Base station or Cellular

Halter

Cattle

Solar rechargeable

Base station

Nofence

Cattle, goat, sheep

Solar rechargeable

Cellular

VENCE

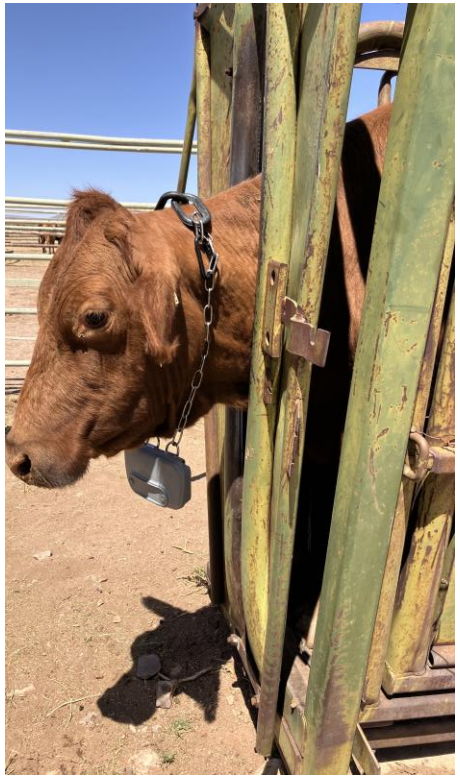
Merck Animal Health

Cattle

Single-use non rechargeable

Base station

Credit: Amber Dalke



Credit: Dennis Moroney

How is the payment rate established?

- Payment rate depends:
  - ➔ number of VF collars you need to purchase for your herd
  - ➔ on location (county based)
  - ➔ historically underserved group (HU) receive higher rates

- If a producer receives funding, USDA-NRCS will pay for VF for **five consecutive years**

➔ **First year:** covers the cost of purchasing equipment and set up

➔ **From year 2 to 5:** covers the cost of subscriptions, operation and maintenance

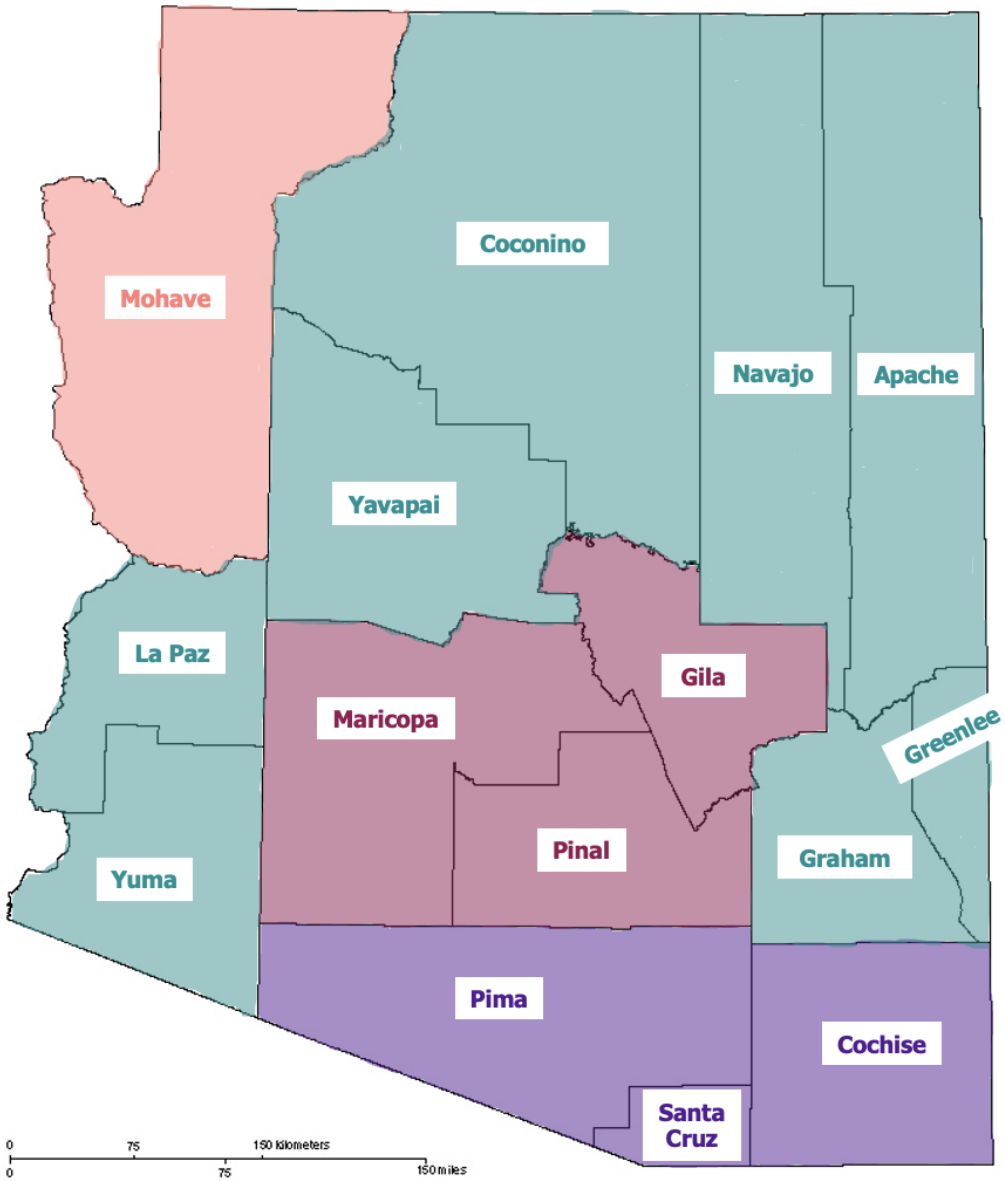
How is the payment rate established?

Lowest Payment Rate

In-between Payment Rate

In-between Payment Rate

Highest Payment Rate



Source: Emilio Carrillo, Arizona USDA-NRCS State Range Management Specialist

How is the payment rate established?

- Minimum herd size needed to qualify for the financial assistance

➔ under that number, USDA-NRCS has concerns about the economic returns

	Apache, Coconino, Graham, Greenlee, La Paz, Navajo, Yavapai, Yuma		Cochise, Pima, Santa Cruz		Gila, Maricopa, Pinal		Mohave	
Component	Cost	HU Cost	Cost	HU Cost	Cost	HU Cost	Cost	HU Cost
VF, Startup Year One, 51 to 199 animals	$139.73	$167.68	$142.66	$171.20	$147.00	$176.40	$143.10	$171.72
VF, Startup Year One, >=200 animals	$91.92	$110.30	$93.85	$112.62	$96.70	$116.04	$94.14	$112.96
VF, Startup Year One, Sheep or Goat	$224.20	$269.04	$228.91	$274.69	$235.86	$283.03	$229.60	$275.52
VF Adaptive Management, Years 2-5	$60.48	$72.57	$61.75	$74.09	$63.63	$76.34	$61.94	$74.32

Payment rate for each VF company

BASE STATIONS

eShepherd from GALLAGHER


Cattle


Solar rechargeable


Base station or Cellular

GALLAGHER

			Apache, Coconino, Graham, Greenlee, La Paz, Navajo, Yavapai, Yuma			
		Number of neckbands	Cost	Out-of-pocket	HU Cost	Out-of-pocket
	Price	100	Year 1		Year 1	
Neckbands (cost)*	$250	$25,000	$139.73		$167.68	
Base station (4 for the example)**	**	$21,000	Year 2-5		Year 2-5	
Annual fee (subscription)	$18	$1,800	$60.48		$72.57	
Year 1	TOTAL	$47,800	$13,973	$33,827	$16,768.00	$31,032.00
Year 2 (annual fee)	$18	$1,800	$6,048.00	-$4,248.00	$7,257.00	-$5,457.00
Year 3 (annual fee)	$18	$1,800	$6,048.00	-$4,248.00	$7,257.00	-$5,457.00
Year 4 (annual fee)	$18	$1,800	$6,048.00	-$4,248.00	$7,257.00	-$5,457.00
Year 5 (annual fee)	$18	$1,800	$6,048.00	-$4,248.00	$7,257.00	-$5,457.00
TOTAL 5 years		$55,000	$38,165.00	$16,835.00	$45,796.00	$9,204.00
TOTAL for 1 cow/5 years		$550				
TOTAL for 1 cow/1 year		$110				

** 4 - 19 neckbands = $350 / neckband*
20 - 59 neckbands = $200 / neckband
60 + neckbands = $250 / neckband

*** Number of base stations will have to be decided with the VF company's help. Base station range (2 to 4 miles).*
First base station = $6,000 - Additional base station = $5,000

Payment rate for each VF company

BASE STATIONS

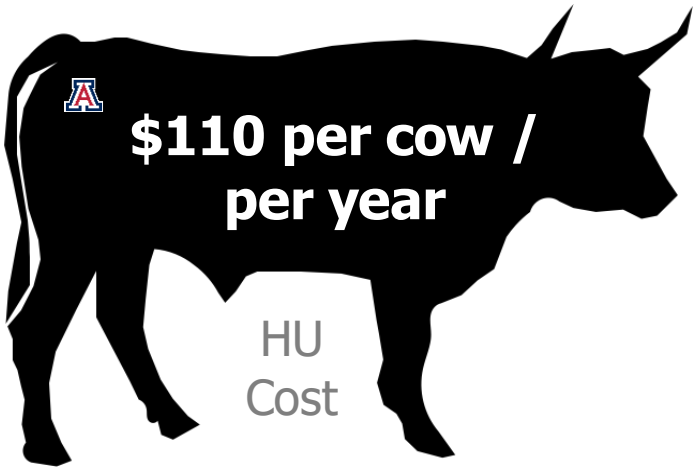
eShepherd from GALLAGHER

Cattle

Solar rechargeable

Base station or Cellular

VS



VS

Payment rate for each VF company

CELL SERVICE

eShepherd from GALLAGHER


Cattle


Solar rechargeable


Base station or Cellular

GALLAGHER

		Number of neckbands	Apache, Coconino, Graham, Greenlee, La Paz, Navajo, Yavapai, Yuma			
	Price	100	Cost	Out-of-pocket	HU Cost	Out-of-pocket
			Year 1		Year 1	
Neckbands (cost)*	$250	$25,000	$139.73		$167.68	
Base station	NA	NA	Year 2-5		Year 2-5	
Annual fee (subscription)	$24	$2,400	$60.48		$72.57	
Year 1	**TOTAL**	**$27,400**	**$13,973**	**$13,427**	**$16,768.00**	**$10,632.00**
Year 2 (annual fee)	$24	$2,400	$6,048.00	-$3,648.00	$7,257.00	-$4,857.00
Year 3 (annual fee)	$24	$2,400	$6,048.00	-$3,648.00	$7,257.00	-$4,857.00
Year 4 (annual fee)	$24	$2,400	$6,048.00	-$3,648.00	$7,257.00	-$4,857.00
Year 5 (annual fee)	$24	$2,400	$6,048.00	-$3,648.00	$7,257.00	-$4,857.00
TOTAL 5 years		**$37,000**	**$38,165.00**	**-$1,165.00**	**$45,796.00**	**-$8,796.00**
TOTAL for 1 cow/5 years		**$370**				
TOTAL for 1 cow/1 year		**$74**				

** 4 - 19 neckbands = $350 / neckband*
20 - 59 neckbands = $200 / neckband
60 + neckbands = $250 / neckband

Payment rate for each VF company

CELL SERVICE

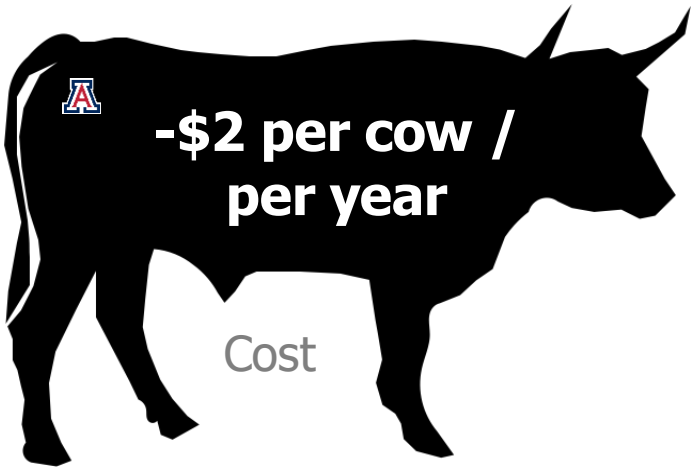
eShepherd from GALLAGHER

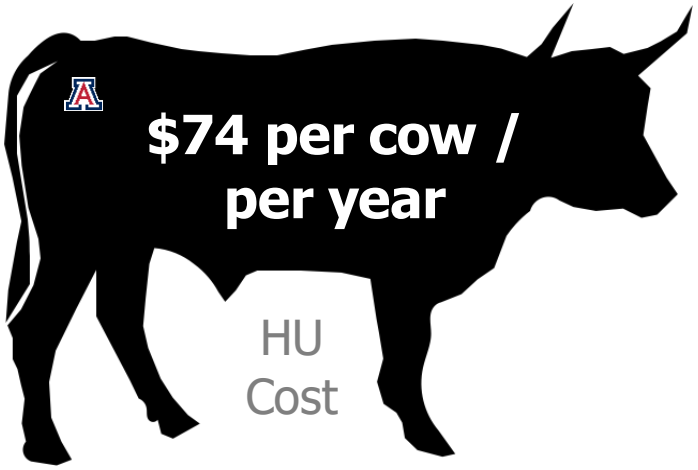

Cattle


Solar rechargeable


Base station or Cellular

VS





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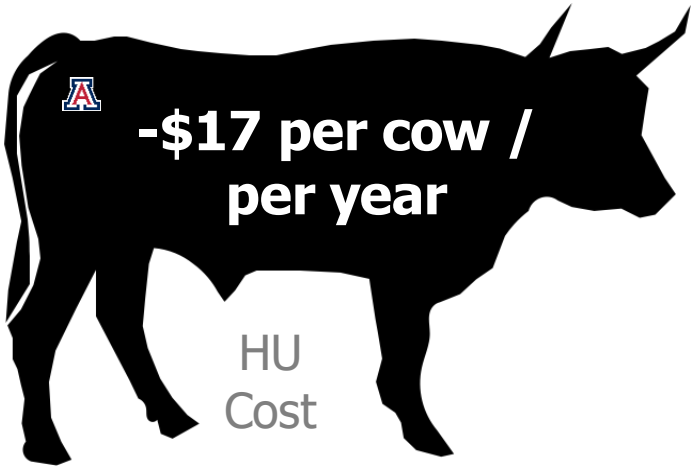


Payment rate for each VF company

BASE STATIONS

Halter


Cattle


Solar rechargeable


Base station

Halter

		Number of collars	Apache, Coconino, Graham, Greenlee, La Paz, Navajo, Yavapai, Yuma			
	Price	100	Cost	Out-of-pocket	HU Cost	Out-of-pocket
			Year 1		Year 1	
Collars (cost)	$0	$0	$139.73		$167.68	
Base station (4 for the example)*	$4,500	$18,000	Year 2-5		Year 2-5	
Annual fee	$66	$6,600	$60.48		$72.57	
Year 1	**TOTAL**	**$24,600**	**$13,973**	**$10,627**	**$16,768.00**	**$7,832.00**
Year 2 (annual fee)	$66	$6,600	$6,048.00	$552.00	$7,257.00	-$657.00
Year 3 (annual fee)	$66	$6,600	$6,048.00	$552.00	$7,257.00	-$657.00
Year 4 (annual fee)	$66	$6,600	$6,048.00	$552.00	$7,257.00	-$657.00
Year 5 (annual fee)	$66	$6,600	$6,048.00	$552.00	$7,257.00	-$657.00
TOTAL 5 years		**$51,000**	**$38,165.00**	**$12,835.00**	**$45,796.00**	**$5,204.00**
TOTAL for 1 cow/5 years		**$510**				
TOTAL for 1 cow/1 year		**$102**				

** Number of base stations will have to be decided with the VF company's help.*

Payment rate for each VF company

BASE STATIONS

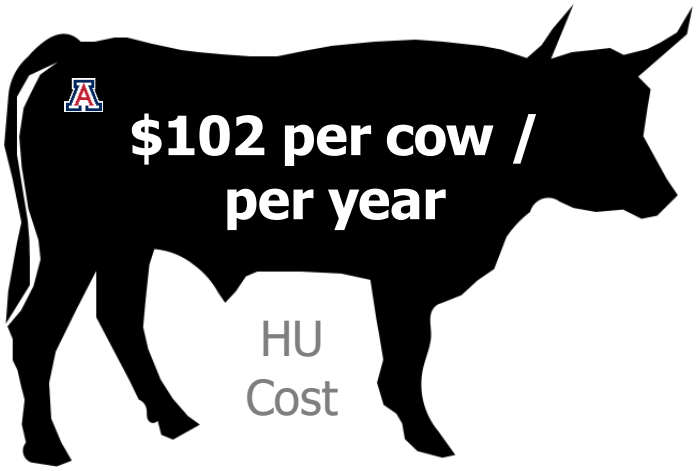
Halter

Cattle

Solar rechargeable

Base station

VS



VS

Payment rate for each VF company

Nofence


Cattle, goat, sheep


Solar rechargeable


Cellular

CELL SERVICE

Nofence

			Apache, Coconino, Graham, Greenlee, La Paz, Navajo, Yavapai, Yuma			
		Number of collars	Cost	Out-of-pocket	HU Cost	Out-of-pocket
	Price	100	Year 1		Year 1	
Collars (cost)*	$289	$28,900	$139.73		$167.68	
Annual fee (subscription)**	$42	$4,200	Year 2-5		Year 2-5	
Chargers	$59	$590	$60.48		$72.57	
Spare batteries***	$89	$445				
Year 1	**TOTAL**	**$34,135**	**$13,973**	**$20,162**	**$16,768.00**	**$17,367.00**
Year 2 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
Year 3 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
Year 4 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
Year 5 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
TOTAL 5 years		**$48,535**	**$38,165.00**	**$10,370.00**	**$45,796.00**	**$2,739.00**
TOTAL for 1 cow/5 years		**$485**				
TOTAL for 1 cow/1 year		**$97**				

**Prices for cattle collars. Small ruminants collars are $199.*

*** Annual fee for 50 collars or more is $42 for the first year, and then $36 per year.*
Annual fee for 49 collars or less is $56 for the first year, and then $52 per year.

**** Extra expenses may be needed for shelter beacons and longer chains.*

Payment rate for each VF company

CELL SERVICE

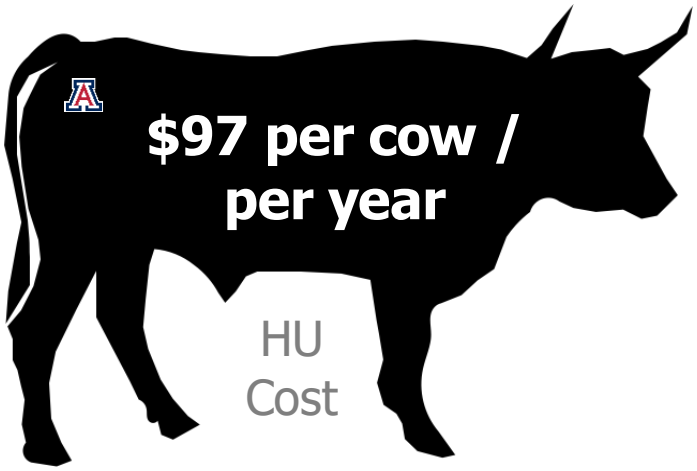
Nofence

Cattle, goat, sheep

Solar rechargeable

Cellular

VS



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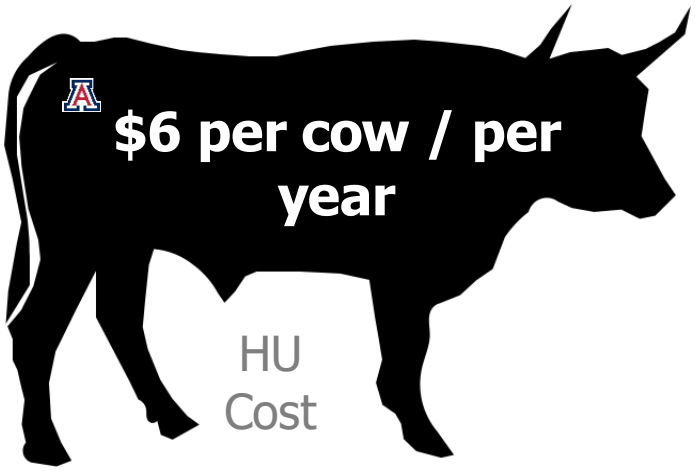


Payment rate for each VF company

CELL SERVICE

Nofence

Cattle, goat, sheep

Solar rechargeable

Cellular

Nofence

		Number of collars	Apache, Coconino, Graham, Greenlee, La Paz, Navajo, Yavapai, Yuma			
			Cost	Out-of-pocket	HU Cost	Out-of-pocket
	Price	100	Year 1		Year 1	
Collars (cost)*	$199	$19,900	$224.20		$269.04	
Annual fee (subscription)**	$42	$4,200	Year 2-5		Year 2-5	
Chargers	$39	$390	$60.48		$72.57	
Spare batteries***	$49	$490				
Year 1	**TOTAL**	**$24,980**	**$22,420**	**$2,560**	**$26,904.00**	**-$1,924.00**
Year 2 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
Year 3 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
Year 4 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
Year 5 (annual fee)	$36	$3,600	$6,048.00	-$2,448.00	$7,257.00	-$3,657.00
TOTAL 5 years		**$39,380**	**$46,612.00**	**-$7,232.00**	**$55,932.00**	**-$16,552.00**
TOTAL for 1 head/5 years		**$394**				
TOTAL for 1 head/1 year		**$79**				

**Prices for small ruminants collars. Cattle collars are $289.*

*** Annual fee for 50 collars or more is $42 for the first year, and then $36 per year.*
Annual fee for 49 collars or less is $56 for the first year, and then $52 per year.

**** Extra expenses may be needed for shelter beacons and longer chains.*

Payment rate for each VF company

Nofence

Cattle, goat, sheep

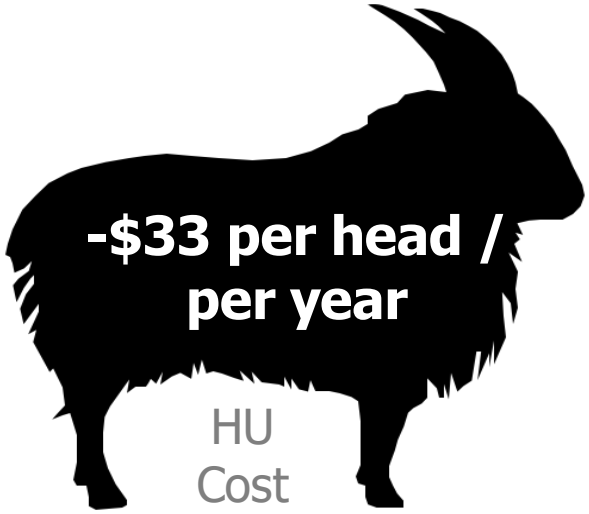
Solar rechargeable

Cellular

CELL SERVICE

VS

VS



Payment rate for each VF company

BASE STATIONS

VENCE

VENCE
Merck Animal Health


Cattle


Single-use non rechargeable


Base station

			Apache, Coconino, Graham, Greenlee, La Paz, Navajo, Yavapai, Yuma			
		Number of collars	Cost	Out-of-pocket	HU Cost	Out-of-pocket
	Price	100	Year 1		Year 1	
Collars (annual fee)	$40	$4,000	$139.73		$167.68	
Base station (2 for the example)*	**$12,500**	$25,000	**Year 2-5**		**Year 2-5**	
Annual fee (2 batteries at $10)**	$20	$2,000	$60.48		$72.57	
Year 1	**TOTAL**	**$31,000**	**$13,973**	**$17,027**	**$16,768.00**	**$14,232.00**
Year 2 (collar fee + 2 batteries)	$60	$6,000	$6,048.00	-$48.00	$7,257.00	-$1,257.00
Year 3 (collar fee + 2 batteries)	$60	$6,000	$6,048.00	-$48.00	$7,257.00	-$1,257.00
Year 4 (collar fee + 2 batteries)	$60	$6,000	$6,048.00	-$48.00	$7,257.00	-$1,257.00
Year 5 (collar fee + 2 batteries)	$60	$6,000	$6,048.00	-$48.00	$7,257.00	-$1,257.00
TOTAL 5 years		**$55,000**	**$38,165.00**	**$16,835.00**	**$45,796.00**	**$9,204.00**
TOTAL for 1 cow/5 years		**$550**				
TOTAL for 1 cow/1 year		**$110**				

** Number of base stations will have to be decided with the VF company's help. Base station range (up to 9 miles).*
Price of base station used in this example is professional installation. If you install it yourself, it will be $10,000.

*** Single-use batterie estimated to last 6 to 9 months depending on use.*

Payment rate for each VF company

BASE STATIONS

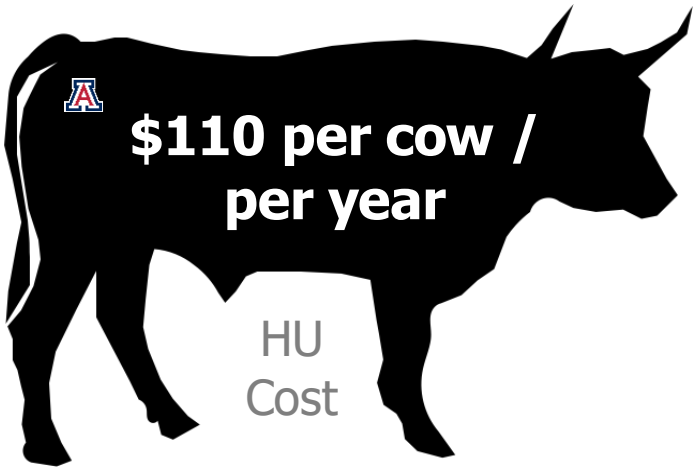
VENCE
Merck Animal Health

Cattle

Single-use non rechargeable

Base station

VS



VS

Take away messages

- Cost should not be the only decision maker!

- USDA-NRCS Cost-Share Program can help decrease the cost of this technology significantly

➔ Gallagher with cell service and Nofence for small ruminants will be free to Navajo Nation ranchers

BUT this might change with the number of collars and base stations needed

➔ This presentation is just an example with 100 collars!

- You should reach out to your local USDA-NRCS office if you are interested in their financial assistance program for the use of VF on your ranch.

The University of Arizona

Virtual Fence Program

THE UNIVERSITY OF ARIZONA
Arizona
Experiment Station

Cooperative Extension

COLLEGE OF AGRICULTURE, LIFE & ENVIRONMENTAL SCIENCES
Natural Resources
& the Environment

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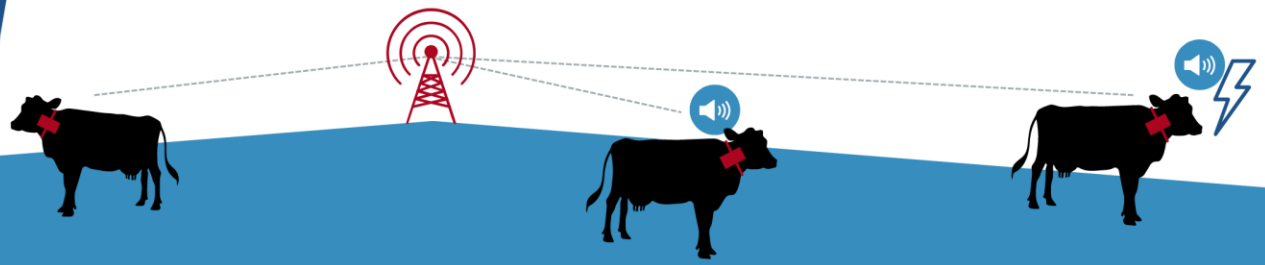

rangelandsgateway.org/virtual-fence

Thank you

Any Questions?

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