

BENTON COUNTY, OREGON

Agriculture and Wildlife Protection Program Annual Report 2020



Curious dairy goats | Jennifer Ward photo | Cleveland Farm, Philomath



Livestock guardian dog, Odin, snuggles with chick | Michelle Schaffer photo | Schaffer Farm, Philomath

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1. Executive Summary

In June 2019, the Benton County Budget Committee approved \$45,000 to fund the Agriculture and Wildlife Protection Program (AWPP) which began as a pilot program in 2017. The AWPP supports the use of non-lethal animal damage deterrents to prevent conflicts with wildlife. In this biennium, funding for the AWPP included \$5,000 for education and consultation services. \$40,000 was available for the cost share reimbursement grant program - \$35,000 for anticipated conflicts with wildlife and \$5,000 for unexpected conflicts with beavers that arise after the grant application deadline.

AWPP grants were awarded in the spring of 2018, in the fall of 2019, and in the fall of 2020. Every year, successful applicants are required to keep project records, report conflicts, evaluate their project, and abide by program requirements for three years following the completion of their project. This annual report summarizes (1) educational outreach activities conducted in 2020, (2) the results of the 2018 projects through Year 3 of implementation and the results of the 2019 projects through Year 1 of implementation, and (3) the awarding of the 2020 grants.

Educational outreach activities in 2020 included ongoing updates to the AWPP webpage (<https://www.co.benton.or.us/awpp>), a conference session, and a tabling event. Staff has also maintained a "Lending Toolbox" (<https://www.co.benton.or.us/awpp/page/lending-toolbox>) to give county residents the opportunity to try non-lethal deterrent devices and materials before purchasing them for themselves.

Grant Program Results: In 2018, the AWPP awarded \$35,363 in grants to eight Benton County farms for non-lethal wildlife deterrent projects. Of the eight projects awarded, six were completed. In 2019, the AWPP awarded \$31,752 in grants to nine Benton County farms. Of the nine projects awarded, seven were completed.

The third, and final, year post-project evaluations for the 2018 grant projects, and the first year post-project evaluations for the 2019 grant projects are summarized in "Section 6.1 Grant Program Results." Findings include:

- About half of the reporting farms from both 2018 and 2019 had no losses in 2020;
- All farms, from both years, reported that they have experienced fewer conflicts with wildlife since using non-lethal deterrents;
- All farms, from both years, reported being "highly satisfied" or "satisfied" with the non-lethal methods and tools they selected, with the individual Agriculture and Wildlife Protection Program elements they utilized, and with the AWPP overall.

2020 Grant Awards: The AWPP awarded \$10,395 of the remaining grant funds to four Benton County farms in 2020. Amounts awarded ranged from \$274 to \$4,934. Of the four farms, three were located in Philomath and one in Corvallis. All were properties under 10 acres in size. Grant recipients proposed to protect a variety of livestock: chickens, pigs, sheep, and goats. All four farms that were awarded grants in 2020, completed their projects and submitted reimbursement claims. The success of these projects over the first year of implementation will be reported in the 2021 AWPP Annual Report.

In February 2021, the County received an application for and awarded the first beaver-related AWPP grant of the biennium. A farm in Kings Valley was awarded \$485.32 to install protective caging around the fruit trees in its orchard. The project will be completed by the beginning of June. Although technically awarded in 2021, the first year post-project evaluation for this project will be included with those of the 2020 projects in the 2021 AWPP annual report.

2. Introduction

In June 2019, the Benton County Budget Committee approved \$45,000 to fund the Agriculture and Wildlife Protection Program (AWPP) which began as a pilot program in 2017 to support the use of non-lethal animal damage deterrents to prevent conflicts with wildlife.

The AWPP funds (1) educational outreach and expert consultation services and (2) a merit-based, cost share, reimbursement grant program. Agricultural operations in Benton County that wish to prevent conflicts with wildlife may qualify for reimbursement grant funds for the purchase and implementation of non-lethal wildlife deterrents to protect livestock and crops. In this biennium, funding for the AWPP included \$5,000 for education and consultation services. \$40,000 was available for the cost share reimbursement grant program - \$35,000 for anticipated conflicts with wildlife and \$5,000 for unexpected conflicts with beavers that arise after the grant application deadline.

This community-based program is funded by Benton County and managed by county officials in partnership with citizen volunteers and representatives from local agricultural and wildlife organizations.

Education and consultation services are provided by Benton County, Oregon State University Extension Service, Chintimini Wildlife Center, and Program Advisors. The Program Advisors include national experts in ranching with wildlife, predator ecology, and human-carnivore conflict.

3. Program Goals

The goals of the Benton County Agriculture and Wildlife Protection Program are to:

- Protect livestock, crops and property while coexisting with wildlife;
- Provide an opportunity for use of non-lethal animal damage deterrents to prevent conflicts with wildlife;
- Educate farmers and the community about wildlife conflicts and non-lethal methods to avoid conflicts;
- Build a collaborative relationship between the farming and wildlife conservation communities and Benton County government around common goals.

The AWPP does not evaluate or make recommendations on everyday animal husbandry practices, farm animal welfare, wildlife habitat, or land use.



Goats mill around their new AWPP-funded shelter | Jennifer Ward photo | Schaffer Farm, Philomath

4. 2020 Program Timeline

January 31, 2020	Evaluation Reports for 2018 and 2019 grant projects due
February 14, 2020	AWPP information table at Corvallis Eco-Film Festival
February 22, 2020	AWPP information table at OSU Small Farms Conference
July 6, 2020	2020 grant application window opens
July 31, 2020	2020 grant applications due
August 10, 2020	Grant Review Committee reviews 2020 grant applications
September 1, 2020	2020 grant awards announced
December 31, 2020	2020 grant projects completed
Dec 2020 – Jan 2021	Site visits to 2020 grant projects

5. Educational Outreach

For the 2019-2021 biennium, the AWPP allocated \$5,000 for the educational outreach program. The educational outreach program provides educational information in the form of webpages, brochures, press releases, information tables and occasional public presentations on wildlife conflict prevention. The AWPP webpage can be found at www.co.benton.or.us/awpp.

Consultation services on the selection and use of non-lethal wildlife deterrents are provided to agricultural operations in Benton County that are anticipating or have experienced conflicts with wildlife.

Education and consultation services are provided by Benton County, Oregon State University Extension Service, Chintimini Wildlife Center, and Program Advisors. The Program Advisors include experts in ranching with wildlife, predator ecology, and human-carnivore conflict.

Educational outreach activities in 2020 were limited due to COVID-19 restrictions, but included updates to the webpage and two tabling events (OSU Small Farms Conference and Corvallis Film Festival). Staff also maintained a “Lending Toolbox” to give county residents the opportunity to try non-lethal deterrent devices and materials before purchasing them for themselves.



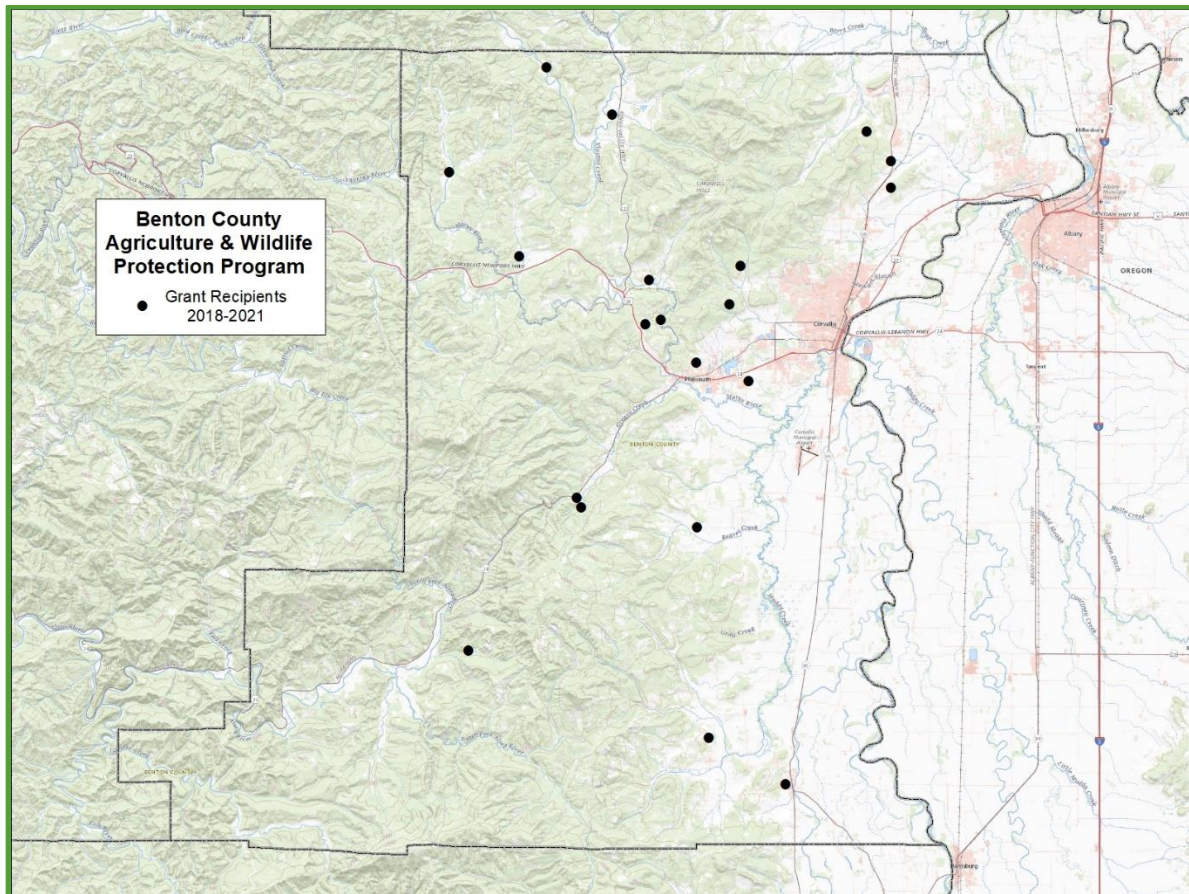
Benton County Natural Resources Coordinator Jennifer Ward with “Lady Baba” on display | Laurie Starha photo | OSU Small Farms Conference

6. Grant Program

6.1 Grant Program Results

The Benton County Agriculture and Wildlife Protection Program (AWPP) began as a pilot program in 2017 with a budget of \$45,000, approximately \$35,000 of which was allocated for the cost share reimbursement grant program. In 2018, the AWPP awarded \$35,363 in grants to eight Benton County farms for non-lethal wildlife deterrent projects. Map 1 shows the distribution of AWPP-funded projects across Benton County from 2018-2021. Of the eight projects awarded in 2018, six were completed (Table 1). AWPP grantees are required to keep project records, report conflicts, evaluate their project, and abide by program requirements for three years following the completion of their project. The first and second year post-project evaluations for the 2018 grant projects were reported in previous AWPP annual reports. The third, and final, year post-project evaluations are summarized here.

In 2019, the AWPP was included as part of the Benton County 2019-2021 budget and was again funded at \$45,000. Of this, \$40,000 was allocated for the cost share reimbursement grant program. In 2019, the AWPP awarded \$31,752 in grants to nine Benton County farms to address wildlife conflicts. Of the nine projects awarded, seven were completed (Table 2). The first year post-project evaluations for the 2019 grant projects are also reported here.



Map 1 | Distribution of Benton County AWPP grant recipients | Randy Comeleo map

Table 1. Six Benton County farms that completed AWPP-funded projects in 2018.

Farm	Location	Size (Acres)	Funded Non-lethal Deterrents	Protecting	Funded Amount
1	Corvallis	4	Electronet and Deer Fencing	Sheep, Goats, Crops	\$4,261
2	Philomath	50	Guardian Dogs, Electric Fencing, Foxlights	Chickens, Turkeys, Pigs	\$5,000
3	Philomath	10	Woven Wire Fencing, Enclosed Barn	Goats, Chickens, Bee Hives	\$5,000
4	Alsea	67	Electric Fencing, Nite Guard Lights	Variety of Livestock, Bee Hives	\$2,621
5	Blodgett	52	Electric Fencing, Night Corrals	Goats	\$3,713
6	Philomath	102	Guard Dogs, Electric Fencing, BirdGard, Birthing Sheds	Sheep ¹ , Hazelnuts	\$4,768

¹ The sheep were sold off in the middle of 2019.

Table 2. Seven Benton County farms that completed AWPP-funded projects in 2019.

Farm	Location	Size (Acres)	Funded Non-lethal Deterrents	Protecting	Funded Amount
1	Corvallis	2	Electronet Fencing, Nite Guard Lights, Bird Repellent Tape, Motion Detection Cameras	Chickens	\$1,677
2	Monroe	3.5	Electronet Fencing, Nite Guard Lights, Bird Repellent Tape	Chickens, Orchard, Vegetables	\$560
3	Blodgett	32	Electric Fencing and Calving Shed	Cows, Turkeys, Pigs	\$4,676
4	Philomath	90	Electric Fencing and Foxlights	Goats, Chickens, Turkeys, Pigs	\$5,000
5	Philomath	10.5	Upgraded Fencing and Electric Fencing	Variety of Livestock, Orchard, Grass Crop	\$3,409
6	Corvallis	4.5	Upgraded Fencing, Electric Fencing, Motion Detection Lighting, Pens	Variety of Livestock, Orchard	\$4,810
7	Monroe	5.14	Birthing Barn	Sheep, Chickens, Timber, Orchard, Fruit	\$3,000

Four of the six “2018” farms submitted post project evaluation forms for Year 3. During the third year of implementation, two of the four reporting farms experienced some crop or livestock losses. **Farm 1** lost a lamb, goat and kid to a suspected cougar. This is understandable since the farm utilizing portable electric fencing which, while effective against smaller predators, rarely excludes cougar. **Farm 4** lost some poultry to great horned owls, which are common predators on their farm. However, they report that their two livestock guardian dogs are getting better at identifying the owls and protecting the flocks.

All seven of the “2019” farms submitted post project evaluation forms for Year 1. During the first year of implementation, four of the seven farms experienced some crop or livestock losses. **Farm 4** is the same for both years since they received AWPP grants in both 2018 and 2019. The other “2019” farms that experienced losses were:

- **Farm 1** lost one chicken to a hawk. Additional placement of holographic tape prevented further predation.
- **Farm 2** lost one chicken likely to a raccoon. They found that their electric fence charger needed to be repaired, which, once accomplished, prevented further losses.
- **Farm 7** lost three chickens to either hawk or bobcat.

All farms, from both years, reported that they have experienced fewer conflicts with wildlife since using non-lethal deterrents.

Additionally, all farms, from both years, reported being “highly satisfied” or “satisfied” with the non-lethal methods and tools they selected, with the individual Agriculture and Wildlife Protection Program elements they utilized, and with the AWPP overall.



Kids, just days old, nestle next to mom in a birthing stall in a barn built with AWPP funds | Jennifer Ward photo | Cleveland Farm, Philomath

The following quotes illustrate the experiences that Benton County farmers are having as they implement their AWPP-funded non-lethal deterrents projects:

- “People ask if the fencing and lights work. All I can say is that I haven’t lost any livestock while I have been using these methods.”
- “We used to shoot raccoons in the chicken yard. Now they don’t appear to get in to kill the chickens. As for cougars, they have so far given our farm a pass while killing livestock on neighboring farms.”
- “...the combination of fencing and a protective structure appear to be working very well at this time – no losses even when the neighbors had goats killed by cougars.”
- “Predators are still present in the area (tracks and game camera pictures) but we have not lost any animals.”
- “The electric fencing, night light, and flashing ribbons all prevent predators from entering the chicken area. I am very impressed by the effectiveness and convenience of the electric fencing.”
- “Predation from owls has decreased every year as the dogs get better at alerting to them and perhaps the owls have grown tired of Foxlights and moved on. The electric perimeter fencing has completely excluded coyotes from the pastures.”
- “Our dog has brought home legs and the head of three different deer indicating that cougar are active in the riparian zone. We also had had feces of either coyote or cougar on our driveway and coyotes super close by, [but] no injuries to livestock nor any loss of life within our fences.”
- “The shed has saved our sheeps’ lives, without a doubt. We are so happy to report zero losses – and are expecting lambs in the spring!



Livestock guardian dog, Lassen, watches over piglets | Laura Sage photo | Red Bird Acres, Philomath

6.2 2020 Grant Awards

Of the \$40,000 allocated for AWPP grants in the 2019-21 biennium, \$11,880 remained in 2020 for a second round of funding. In 2020, the AWPP awarded \$10,395 in grants to four Benton County farms to fund non-lethal deterrents projects. All four projects were completed (Table 3). The first year post-project evaluations for these 2020 projects will be reported in the 2021 AWPP annual report.

Table 3. Four Benton County farms that completed AWPP-funded projects in 2020.

Farm	Location	Size (Acres)	Funded Non-lethal Deterrents	Protecting	Funded Amount
1	Corvallis	1.17	Coop Extension	Chickens	\$274
2	Philomath	2.75	Electronet Fencing	Chickens	\$638
3	Philomath	3	Electric Fencing and Shed	Goats, Chickens, Bees	\$4,549
4	Philomath	5.46	Motion Lights and Barn	Goats, Pigs	\$4,934

In February 2021, the County received an application for and awarded the first beaver-related AWPP grant of the biennium. A farm in Kings Valley was awarded \$485.32 to install protective caging around the fruit trees in its orchard. The project must be completed by the beginning of June. Although technically awarded in 2021, the first year post-project evaluation for this project will be included with those of the 2020 projects in the 2021 AWPP annual report.

Livestock Shelters Built with AWPP Funds in 2020



Goats | Jennifer Ward photo
Schaffer Farm, Philomath



Chickens | Jennifer Ward photo
Steingass Farm, Corvallis



Goats and pigs | Jennifer Ward photo
Cleveland Farm, Philomath

7. Reading List

7.1 Websites

AWPP Website: <http://www.co.benton.or.us/awpp>

Livestock-Predator Hub: <http://rangelands.ucdavis.edu/predator-hub/current-research/>

Farming with Carnivores Network: <http://farmingwithcarnivoresnetwork.com/animal-husbandry/>

Non-Lethal Solutions to Reduce Conflicts: <https://tinyurl.com/y9eyed3h>

The Encyclopedia of Animal Predators: <https://www.jandohner.com/resources>

Safeguarding Livestock: <http://mountainlion.org/portalprotectlivestock.asp>

Resolving Conflicts with Beaver: <https://www.beaverinstitute.org/>

7.2 Books

Dohner, J.V. 2017. The Encyclopedia of Animal Predators. Storey Publishing, North Adams, Massachusetts. <https://www.amazon.com/Encyclopedia-Animal-Predators-Behaviors-Livestock/dp/1612127053>

Goldfarb, B. 2018. Eager: The Surprising, Secret Life of Beavers and Why They Matter. Chelsea Green, White River Junction, Vermont. <https://www.amazon.com/Eager-Surprising-Secret-Beavers-Matter/dp/160358739X>

Shivik, J. A. 2014. The Predator Paradox – Ending the war with wolves, bears, cougars, and coyotes. Beacon Press, Boston, Massachusetts. <https://www.amazon.com/The-Predator-Paradox-Cougars-Coyotes/dp/0807084964/>

7.3 Newspapers and Magazines

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Lies, Mitch. “Alternative Animal Damage Control Program Takes Root.” *Growing Newsletter*, July-August 2018, <https://tinyurl.com/y598cgs7>

7.4 Scientific Journals

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Linnell, J.D.C., M.E. Smith, J. Odden, P. Kaczensky, J.E. Swenson. 1996. Strategies for the reduction of carnivore-livestock conflicts: a review. *NINA Oppdragsmelding* 443:1-116. <http://tinyurl.com/y3czhj2a>

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<http://tinyurl.com/y2bupamd>

Shivik, J. A., A. Treves, P. Callahan. 2003. Non-lethal techniques for managing predation: primary and secondary repellents. *Conservation Biology* 17:1531-37.

http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1266&context=icwdm_usdanwrc

Shivik, J.A. 2004. Non-lethal Alternatives for Predation Management. *Sheep & Goat Research Journal* 19:64-71. <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1013&context=icwdmsheepgoat>

Treves, A., M. Krofel, J. McManus. 2016. Predator control should not be a shot in the dark. *Frontiers in Ecology and the Environment* 14(7): 380–388.

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