University of California
Agriculture and Natural Resources | Research and Extension Center System

Living with Wildlife: New and Emerging Research

Rod Shippey Hall, Hopland Research and Extension Center, 4070 University Road
08:30am-3pm, Thursday, August 31st, 2017
In collaboration with the UC Hopland Research and Extension Center and UC Berkeley

Situational Data to inform Rancher Panel Discussion

Each specific situation may require a diverse set of management tools to address the complex interactions between people, livestock and wildlife on a given ranching operation.

No single tool can be successfully applied in all situations, therefore understanding the diversity of situations and the potential impacts on people, livestock and wildlife may inform the choice of tools for each given conflict and/or situation.

It should be recognized that nonlethal tools may not be successful in all situations and it is understood that most ranchers use a combination of both lethal and nonlethal tools in their operations.

This workshop focuses primarily on nonlethal options now being researched at HREC and elsewhere to add new tools to the limited options now available.

Name of Owner/Operator/Family: Robert and Jaime Irwin

Location: Home Clearlake Oaks – Operations in Yolo, Colusa, Lake and Mendocino Counties.

Describe the environment(s) you manage, for example, open grasslands; forested areas with limited open clearings, chaparral, etc.

Tree, vineyards, other ag. residue (bean, alfalfa, wheat stubble); wildlife refuge; rangelands and forested areas (hope to get more BLM, USFS permits in the future).

Describe the diversity of topography: relatively flat, rolling hills, steep ravines, etc.

Most challenging for wildlife: probably the mountains, though Williams ranch has been "feeding coyotes for a long time "– coyotes habituated on this permanent pasture versus the moving operations they predominantly have practiced which prevents this.

Leased grounds are permanent and these require increased use of dogs and more fencing.

Only 25 head per year to wildlife losses, mostly lambs.

Did lose one ram to coyote Lake County.

Adjacent to open areas can create more challenges since wildlife move through the corridors.

Coyotes are pervasive but losses due to human stealing is larger across all landscapes.

Can solve coyote problems easier than the human poaching issues.

Cannot have aggressive dogs, so they are used to humans, thus allowing humans to steal animals.

The Irwin's experience 100-200 lost to poaching each year!

What tools may help?

Herders can help if you manage them correctly too.

Video system or other tools to set up for these losses.

Cameras help but take labor to review and the time gaps may not allow for any enforcement.

Any other unique features impacting livestock management and/or potential wildlife behavior issues?

Adjacent land uses impacting your operations – if open spaces, more wildlife.

Types of livestock managed and numbers of each:

Breeding ewes 3,500 plus over how many locations 16 different groups in different areas, now have 7 active grazing areas they are managing.

Wolves on the landscape? Drones to alert managers of the presence of wolves may be a great tool.

Types of nonlethal tools currently used in operational procedures

Types of wildlife you experience most conflicts with and any/all specific tools used to address these conflicts (both nonlethal and/or lethal combinations)

Barriers to successful use of nonlethal tools? (Costs, terrain, time, labor, etc.)

Work nonaggressive dogs to work with people.

Dogs cost $30,000 per year they run 30 dogs now.

Increased guard dogs from 15 – 30 – lots of training.

Expense and time a problem.

16 groups and two dogs per group.

Constant care and attention to dog behavior.

Vet bills and caring for dogs a problem.

Care for their dogs takes time and money and all different.

Fencing challenges?

Netting used on range; 3 wire on vineyards.

Topics for future research:

Permanent systems have different problems than moving like they do; when coyotes figure you out you need research to address this; get more dogs or whatever it takes.

Movement is best for animals and the land so mixing this up is important.

Other topics:

Foot rot – just now looking at this for sheep in CA – For moving sheep this is critical but if your sheep are permanent you can eradicate it at the location.

Labor

Genetics

Public interface – educate the public about food system.

Topics for future educational workshops: (ex: preserving kill site for identification and what range of options may be available in your area; focus on recreational and/or other interactions with wildlife; etc.)

Educating consumers.

Anything else you wish to share to better understand and/or address your specific situation?

As producers, the movement will be towards grazing jobs with targeted ecological goals; moving towards these goals and interfacing with the public.

Name of Owner/Operator/Family: Kyle Farmer representing the Magruder Family

Location: Potter Valley, Mendocino County

Describe the environment(s) you manage, for example, open grasslands; forested areas with limited open clearings, chaparral, etc.

The properties they own and/or manage cover from the valley bottoms to the ridge tops, with diverse habitats and challenges throughout each type. They understand that the situations they may encounter must be evaluated based on their place on the landscape. "Consulting the genius of place" a quote by Wes Jackson frames the work Kyle Farmer practices as a rancher.

Any other unique features impacting livestock management and/or potential wildlife behavior issues?

The fragmentation on the landscape and the emergence of subdivisions creates unique problems for these ranchers and for the livestock dependent on large (HUGE) territories and/or corridors.

Adjacent land uses impacting your operations

The neighbors may not all be ranchers and some neighbors love elk while others want to exclude elk from their property (unless they can get hunting money from them). This creates some challenges, since the Magruders welcome the elk on the landscape.

Please describe any/all other factors you think may influence your specific situation and related management options

Types of livestock managed and numbers of each: Cattle are the primary livestock managed for profit though they also have 60 ewes and 30 pigs.

Cattle are major focus of the dialogue related to wildlife challenges and opportunities today.

Types of nonlethal tools currently used in operational procedures

Fencing types that work to support cattle without injuring or negatively impacting elk movement is a challenge for these ranchers.

They have learned how to develop a fence that allows calves to move under the fence, while elk can move over the fence – discuss the fencing you use and the problems you have experienced and/or observed with elk and other grazing operations.

Some types of fences and all subdivisions act as barriers to elk movement on the landscape.

Types of wildlife you experience most conflicts with and any/all specific tools used to address these conflicts (both nonlethal and/or lethal combinations)

Kyle is most concerned with wolves on the landscape.

Wolves hunt in packs and run the animals until they get one to break away from the group for the kill.

This creates incredible stress on the cattle resulting in several serious health problems, including weight loss and fatigue, as well as death to some individuals.

Kyle is concerned the fragmented landscape cannot support the elk and/or the wolves.

With respect to elk, he supports controlling the population through educated hunting.

Limit the trophy hunting and educate a small focused group of hunters to target the weaker animals with poor genetic traits, such as underbites, which may create long term adaptation issues for the elk.

While we work as a society to seek more connectivity in the landscapes, we need to control the current wildlife and avoid more reintroductions to avoid further overpopulation in this fragmented landscape.

Pitbulls are a major issue for them during harvest season for marijuana growers and are shot and killed when possible.

They also may move their animals to avoid potential conflicts with the pitbulls or other dogs protecting grow operations.

Barriers to successful use of nonlethal tools? (Costs, terrain, time, labor, etc.)

Kyles stated “there is always a role for a professional” in these matters with respect to the role(s) WS may play to address living with wildlife going forward.

Verifying the problem wildlife is one example of this professional experience that many ranchers and others concerned with wildlife lack.

Topics for future research:

More research on fire grazing – both grazing to reduce fuels and prevent fires, as well as targeted grazing following fires to support defined ecological goals.

More research on foot rot and foothill abortion.

More applied research and demonstration of oak regeneration at a landscape level.

Research on creating “zones of influence” on the landscape to slow fires and reduce their intensity rather than trying to create huge barren fire lines as potential way to “stop” fires.

Research between the intersection of grazing sheep and fire is an especially interesting topic.

Quail research related to habitat protection .

Topics for future educational workshops: (ex: preserving kill site for identification and what range of options may be available in your area; focus on recreational and/or other interactions with wildlife; etc.)

More demonstrations of these applied research efforts in action on a variety of landscapes.

Anything else you wish to share to better understand and/or address your specific situation?

Kyle advises that we learn to "accept what we cannot control" as we learn to live with wildlife.

He hopes private landowners can be recognized and rewarded for their role in supporting wildlife and providing critical habitat.

We no longer have the BIG country we used to have and if Yellowstone is not big enough for wolves, we are going to have major challenges in California.

We need to protect and connect our current landscapes.

Name of Owner/Operator/Family: Joe Pozzi

Location: Marin County

All sheep in northern Marin –three miles from coast

Describe the environment(s) you manage, for example, open grasslands; forested areas with limited open clearings, chaparral, etc.

Rolling hills, some trees but isolated clumps.

Challenging for fencing.

These sheep tend to spread out rather than flock together.

Dorset and Suffolk and others.

English pasture breeds, coarse wool breeds primarily meat market but innovative wool market for bedding using wool.

Fencing woven wire 6 inch squares, barbed wire on top 45 inch height ($7 per foot about 10-11 miles of fence).

Goal to keep animals in and predators out.

Size depends on terrain and watering opportunities.

Any average 100 acres per grazing pasture unit.

Sheep per acre higher with more feed in this area, deeper soils.

600 sheep over 900 acres total.

Most have cattle too with them- 100 cows total in this operation.

Adjacent land uses impacting your operations –

Hard problem next door at past location would not allow coyote control on his property in the past.

Agriculture all around now so they will work together to control coyotes.

MALT lands protected for ag. and this helps.

Please describe any/all other factors you think may influence your specific situation and related management options

Political situation in Marin.

Attrition in the sheep industry.

Any loss is significant.

Digging coyotes are a problem – too costly to bury fencing to keep coyotes out creates erosions and creates problems in ravines.

Wet winters undermine fencing, creates holes.

Types of nonlethal tools currently used in operational procedures

Fencing is a tool but not going to keep coyotes out.

Hot wires help but too difficult to maintain.

Guard dogs – three guard dogs, seeking one dog – they are a tool but they are tough some roam or worse yet get into trouble.

Balancing the number of guard dogs and managing these dogs is critical.

Pasture lamb in sheltered areas and close to control losses, yet most losses occur when lambs are out in the pastures.

Coyotes are the biggest problem - 90% of problems relate to coyotes; ravens and lions less common for losses.

No bears.

Open ground keeps lions and bears populations down.

Not certain how wolves will behave on this landscape – concerned with cross breeding with coyotes.

Wolves require take permit so verifying kill required if/when wolves arrive on this landscape.

Having a WS on call is vital for the ranchers.

This was eliminated on Marin and has impacted his operations and many others, yet the number of coyotes or other wildlife "saved" is not certain.

Ranchers will turn to others who may not be as professional as WS to take care of problem coyotes.

Ranchers will do what they can to stop the killing by coyotes and losses to livestock.

There are no records now so it is not possible to determine how many coyotes were "saved" in Marin.

What is done in Marin now? No trained professionals available at this time to ranchers.

Some funds to help support nonlethal tools.

Can get $3000 -$4000 per year if you qualify with your flock size of 300 or greater – this helps but certainly does not offset the larger investment costs to ranchers.

Rotating pastures, calling coyotes in when getting problems and shooting them, use snares but tricky when you have guard dogs.

Barriers to successful use of nonlethal tools?

The terrain can be a challenges for fencing.

The wet weather impacts fencing and increases maintenance challenges.

Impossible to maintain that many miles of fencing.

Topics for future research:

Research on endangered species on private lands – working hypothesis is that private ranch lands provide critical habitat for several endangered species and this needs to be documented and recognized by the public and the agencies.

Topics for future educational workshops: (ex: preserving kill site for identification and what range of options may be available in your area; focus on recreational and/or other interactions with wildlife; etc.)

What are options for lethal tools now and in the future should be a future topic.

Identifying the responsible wildlife – how to study the kill in order to target the problem species.

How to ensure you are killing the problem animal – this area of research is critical since the tool(s) to address this, primarily the Livestock Protection Collar, is no longer available to ranchers in California.

Ranch management plans and larger picture of habitats provided – how coyotes and other predators interact on the landscape is a great topic for future workshops.

Anything else you wish to share to better understand and/or address your specific situation?

Still misses the livestock protection collars since they were able to get the problem animal.

Now killing coyotes that respond to the calls and may not be getting the problem animals.

Need to diversify the tools and try to retain the tools we have.

Joe appreciates wildlife but cannot tolerate or afford losses and maintain an economically viable operation.

Ranchers provide the habitat and this needs to be valued and appreciated in the big picture.

Name of Owner/Operator/Family: Ana Cox, Shamrock Artisan Goat Cheese, Summer Breeze Ranch

Location: 24225 Reynolds Hwy Willits, Little Lake Valley surrounded by mitigation property – open space required by Army Corps of Engineers required of Cal Trans all wild Elk, some cattle run on it and another lease agreement with RCD

Describe the environment(s) you manage, for example, open grasslands; forested areas with limited open clearings, chaparral, etc.

117 acres fairly level in flood plain

Regular flooding in winter

Dec/Jan – April/May

Describe the diversity of topography: relatively flat, rolling hills, steep ravines, etc.

13 acres fairly steep, redwood trees – horses live there.

7 Anatolian protect all livestock – trained as team.

(Ana Cox trains the dogs. She has been able to work with every dog she trained. Not perfect but she sees it as her responsibility to train and take care of the dogs – not the dogs fault – the owners.)

No major vet bills except for breeding complications (and that was $2,800.)

Free choice of food provided to dogs all day long feed High protein feed from tractor supply.

How long is a working dog good? Up until they die 10-11 years or so.

Any other unique features impacting livestock management and/or potential wildlife behavior issues?
Elk, coyotes, mountain lions, bears. Anticipate wolves when they arrive

Adjacent land uses impacting your operations

The open space around the property is mitigation lands Cal Trans has and RCD manages. Some cattle leased on the area. The rancher working the cattle hates elk and would prefer to kill them all so this creates some challenges.

Types of livestock managed and numbers of each:

287 all types of Goats.

200 is target long term maintenance number.

When kidding it can go up to 500.

Both barn and open pasture when kidding but always nearby in eye sight of people and/or dogs.

Types of nonlethal tools currently used in operational procedures – dogs and fencing.

Need more than 1-2 dogs.

Need more dogs when acreage increases.

Good fencing and operational electric fencing to keep dogs from jumping to protect the livestock.

Topics for future research:

Not certain larger breeds are necessary or even desirable – tough to deal with, bad hips, etc.

Anatolian shepherds healthy breed.

Topics for future educational workshops: (ex: preserving kill site for identification and what range of options may be available in your area; focus on recreational and/or other interactions with wildlife; etc.)

Need more workshops like this one and encourage dialogue, support the mentality of living with our wildlife rather than eradicating everything around us and/or controlling it.

More classes to test and train work with guard dogs.

Marvelous breeds as proven guardian dogs.

Need to learn more from agencies and individuals that have been successful with dogs, especially as wolves come on the landscape.

Anything else you wish to share to better understand and/or address your specific situation?

Costs to maintain fencing? Incidental in her mind since each operation needs to keep up good fences.

Goat fencing is the best fencing – goats tend to wonder and they are smart.

The fences with neighbors that have horse can be a problem to maintain.

The electric fence can help but horses can damage goat fencing.

Best investments – electric fencing – keeps dogs in.

Does not keep wildlife out but allows dogs to do their jobs.

Cannot expect 1-2 dogs to do all the work – several are needed to be effective.

If you do not have the funds to maintain fences, you should not be in ranching operations.

How do you feel about the elk?

I love the elk – horses and cows tear up fences too….we need to learn to live with wildlife, cannot simply kill them- ranchers must learn to minimize damage.

Under what situation would you use lethal control? Domestic dogs are biggest problem.

One mountain lion kill once but neighbor's dogs did massive damage by comparison.

Had wild pigs once but not common problems – enjoy the wildlife.

18 elk throughout the year, some very old with huge horns.

How do you feel about wolves entering the landscape?

We need to learn how to mitigate the impacts.

Hoping large number of large dogs to form a pack will assist in protecting against wolves.

She keeps her dogs related and as a family team.

Name of Owner/Operator/Family: Gary Johnson

Location: Anderson Valley area, Mendocino County

Describe the environment(s) you manage, for example, open grasslands; forested areas with limited open clearings, chaparral, etc.

Forested landscape, not too steep but plenty of riparian areas and wooded areas for wildlife to hide or be protected.

The terrain poses the greatest challenges for use of diverse tools to prevent or address conflicts.

Describe the diversity of topography: relatively flat, rolling hills, steep ravines, etc.

Already described.

Any other unique features impacting livestock management and/or potential wildlife behavior issues?

Adjacent land uses impacting your operations?

Across highway , no control and no livestock so challenges with wildlife and the guard dogs; another neighbor raises cattle and does no coyote control also creates further problems other neighbors support control of coyotes and cooperate with Gary and family.

Please describe any/all other factors you think may influence your specific situation and related management options.

The lack of labor limits the people power to address the diverse wildlife challenges.

Limited income from operations restricts investments in new tools.

Fences damaged in recent storms may not be readily repaired due to terrain, access, costs, etc.

Pasture lambing creates new and different conflicts than barn lambing since lambs and breeding ewes may be at high risk during birthing in the field.

Types of livestock managed and numbers of each:

Around 200 breeding ewes, 50 replacement ewes and 10-11 rams (plus his personal flock).

Cattle numbers?

120 separate from sheep – used to run them before getting guard dogs – cattle can create problems for the dogs.

Types of nonlethal tools currently used in operational procedures

Guard dogs – two with main flock and two with smaller flocks – cost $600 per year or so.

Types of wildlife you experience most conflicts with and any/all specific tools used to address these conflicts (both nonlethal and/or lethal combinations)

Major conflicts with lambs and ewes during lambing are due to coyotes and/or raven.

Both of these species represent significant losses and challenges in a given year.

Gary will set leg snares and use his professional calling skills and trained dogs when he experiences losses.

Cattle are grazed in areas with high losses of sheep and are managed separate from the sheep.

Mountain lions are biggest problem though periodically coyotes will take calves.

Barriers to successful use of nonlethal tools? (Costs, terrain, time, labor, etc.)

The landscapes here only support @ one ewe per acre (versus 2 ewes per acre in Marin or other productive areas for forage) limiting operational budget and investments in new tools.

Acknowledging the diverse economic situations as well as terrain and habitat issues is necessary when seeking viable tools for ranchers.

Guard dogs will sometimes respond to the call(s) for the wildlife so this creates problems, especially when coyotes have the guard dogs figured out.

Gary tried nonlethal tool for 35-40 years – such as llamas, donkeys, propane cans, electronic shepherd (eyes that go off periodically around the bedding grounds); sheep perfume, rubber band around necks of lambs – 4 inch band from rubber tubes to keep coyotes form killing lambs, human hair, tried strobe lights at night, etc.)

Take care of things for the night for a while but creates day feeding patterns.

Topics for future research:

Research options for ravens and mountain lions.

Hopes the e- collars being tested now work as they will be a great tool for many ranchers.

Topics for future educational workshops: (ex: preserving kill site for identification and what range of options may be available in your area; focus on recreational and/or other interactions with wildlife; etc.)

Anything else you wish to share to better understand and/or address your specific situation?

Losing the tool, the Livestock Protection Collars, that targeted the problem coyotes, creates a challenge since current killing may not always target the problem animal.

Nonlethal tools are generally learned by coyotes within a few years of application.

Continued research to truly target the problem coyotes is still needed.

Different years are different problems – some years you get coyotes that kill ewes and lambs and some years that are not such trouble….different problems at different times…

Lions have not been a problems recently but when it is a problem it can be severe.

Biggest concerns about wolves on the landscape? They kill guard dogs and guard dogs are one of the best tools we have.

May be out of cattle business when wolves arrive since Mendocino cattle graze low numbers of cows over large acreage makes kills easier - fladry and other tools tougher to apply in this country.

The lack of concentrated grazing here makes it challenging to control wildlife losses with the nonlethal tools now available.

Also, tough to do control work with lions and bears because wolves may get to the problem and take the hounds before you can save the dogs since wolves are so territorial.
