

Targeted Grazing Survey Report to California Wool Growers Association
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Introduction

The California Woolgrowers Association (CWGA) Wildfire and Grazing Ad Hoc Committee conducted a targeted grazing survey to better determine the size, scope and impact of targeted grazing in California. The survey was conducted December 2020 – March 2021.

Methods

The survey consisted of 10 questions and was completed via telephone interview. All responses are kept anonymous and results were aggregated. There were 32 targeted grazing providers who completed the survey. An additional operation indicated they were out of the targeted grazing business. They provided comments on targeted grazing challenges are included.

Below is a table that summarizes the sources for the 32 survey contacts and that completed the telephone survey. A targeted grazing survey respondent had to manage a minimum of 50 sheep and/or goats in order to be included in the survey. The sources for contacts included:

- CWGA Targeted Grazing Directory (<http://californiawoolgrowers.org/targeted-grazing/directory/>)
- One CWGA Targeted Grazing Directory did not take the survey because they had gotten out of the business. They did submit email comments on challenges, and these were included in those comments.
- UC Cooperative Extension (UCCE) Placer/Nevada Counties Targeted Grazing Contractors List (<https://ucanr.edu/sites/Livestock/files/320510.pdf>)
- UCCE Sonoma County Match Graze website (<https://matchgraze.com>)
- 2 contacts not any of the above lists that were known to be targeted grazing contractors
- Surveys were broken into 3 groups: <500 head (12 providers); 500 - <2500 head (9 providers); and ≥ 2,500 head (11 providers).
- The survey captured 11 providers with over 2,500 head that grazed 90.6% of total acres grazed by the 32 respondents. There were some of the largest businesses in the state. While not a complete picture of total paid acres in the state, it is a representative sample.

	CWGA Targeted Grazing Directory	UCCE Placer / Nevada	UCCE MatchGraze	Not on Other Lists
Surveyed List Contacts	15	7	8	2
List Contact Out of Business	1	1		
List Contact Not Doing TG	2			
No Response	1	1	2	

Survey Results Main Points

- 75,714 paid acres were grazed by survey respondents. 68,580 paid acres (90.6%) grazed by operations \geq 2,500 head in size
- Top 2 targeted grazing services provided by total paid acres were fuel load reduction (73.7%) and Vineyard/Crop (21%).
- Species managed by 32 surveyed providers were sheep only (12 providers); goats only (4 providers); sheep and goats (16 providers).
- Average number of contracted months was 6.5 with a range of 5.7 to 6.4.
- The top 5 entities targeted grazing services were provided include: Government (29) Private landowners (20), Homeowners' Associations (16), Parks (14 providers), Vineyard/Crop (13 providers). Larger operations ($>1,000$ head) provided targeted grazing services for solar farms (8 providers).
- Targeted grazing services are being or have been provided in 46 out 58 counties by 32 surveyed providers.
- Targeted grazing was the main source of income of 15 surveyed providers (46.7%).
- The top challenges listed by surveyed respondents: business related, public education, outreach, and animal welfare, animal production, husbandry, and training, and operations.

Top Challenges Results Discussion

Business Challenges

Labor

Labor was identified as a challenge by 19 out of 32 respondents (59.4%). The main challenges were finding, training, keeping, and paying labor. Sheepherders are primarily responsible for animal welfare, grazing management, and moving livestock. There is not enough supply of people interested in becoming herders in the United States. Many of the few interested would lack experience and need extensive training. Most targeted grazing service businesses have overcome this by utilizing the H2A Guestworker program by bringing over experienced herders from outside the United States, primarily from Peru.

California Assembly Bill 1066 (AB1066) primarily dealt with overtime for agricultural workers. This was cited as a challenge by 46.8% of all survey respondents (63.6% of businesses with $>2,500$ head). Herders live with the herd and are considered to be on call 24 hours a day. Prior to the passage of AB1066 in 2016, herders had worked under an exemption from overtime due to the unique nature of their job. After AB1066 passed, sheepherders were considered to be working for 168 hours a week (24 hours a day, 7 days a week). The increased overtime cost would cause sheepherder wages to rise 52%.

This change will dramatically impact existing targeted grazing service businesses. Increasing rates to cover the increase may price themselves out of existing markets. Businesses absorbing the cost would threaten financial and economic sustainability. One targeted service grazing provider ($\geq 2,500$ head) estimated the impact would be an increase of over 50% increase in labor costs. Their targeted grazing service rates would need to increase by one third.

Contracts

Contracts were identified as a challenge by 18 out of 32 respondents (56.3%). Challenges noted were understanding the request for proposal (RFP) process, developing bids, contract submission, and what happens after the contract is signed. Another challenge is that everyone wants the work done during the same time period, spring in California. One company noted tracking and submitting RFPs were almost a full-time job. One challenge noted was the lack of known research or standard for potential clients to know that targeted grazing services works.

Development of competitive bids that resulted in successfully getting the contract at a profitable was another challenge. It was noted the importance of understanding the costs of other treatment option such as mowing, herbicides, and mechanical treatment. Underbidding was another challenge. This can be from startup businesses not understanding their true costs or an existing one needing cash flow.

Most if not all bids require liability insurance. This was identified as a challenge by 4 out of 32 respondents (12.5%). Respondents with $\geq 2,500$ head were the most concerned of the three groups (4 out of 11 respondents or 36.3%). The targeted grazing service business is being viewed as a separate business needing its own insurance versus a general ranch liability policy. It is viewed as having increased risk and one business noted rates had increased 30%. Liability risk concerns were proximity to urban areas, dog bites, and sheep getting on the highway. One business noted having sleepless nights over these risks.

Regular communication was noted as essential one the contract is signed in order to keep everyone on the same page. One part of this is a shared understanding between client and provider on what constitutes successful completion of a project.

Bureaucracy / Government Agencies

Bureaucracy/Government Agencies was identified as a challenge by 8 out of 32 respondents (25.0%). Government agencies may lack an understanding of grazing benefits, what is entails to implement a grazing project, and the need for maintenance grazing following mechanical or hand treatment of an area. The lack of understanding can contribute to a bias against grazing or concern over habitat.

Regulation can be a challenge and may need to be changed or amended to be able to implement grazing projects in the area. A city wanting to do a grazing project was impacted by an ordinance that limited the number of animals within city limits. The only way to increase allowed number of animals was to apply for a circus permit.

Communication was another bureaucratic challenge. It was difficult to identify and reach the right person in the right department to let them know about your business and find out about upcoming project opportunities. Slow paperwork approval on a project can happen at times.

Bureaucracy can impact ongoing projects in a challenging way. A provider was going to run out of forage on a Saturday and needed to move animals to a different location on the project site. The expansion was granted, but not until the following Monday. On another government project, a biologist recommended increasing the number of animals. The provider said animals were hauled over to the site in a trailer, only to find out that another biologist had decided the increase in animals would impact wildlife habitat. The extra animals were not allowed on the project.

Scale of Operation and Access to Capital

Scale of operation was identified as a challenge by 11 out of 32 respondents (34.4%). Half of the respondents with <500 head were challenged by scale. Access to capital was identified as a challenge by 3 out of 32 respondents (9.4%). Increasing scale enabled the ability to bid on larger contracts, transition to a full-time job, and make the business profitable. It is important for a smaller business to run economic and financial analyses to confirm that increasing scale will improve profitability. Capital is needed for infrastructure development including fencing, water tanks and pumps, trailers for livestock transportation and storage, and buying more animals. One business developed a collaboration with a firesafe council which purchased two five hundred gallon water tanks, trailer, and arranged for access to city water.

Marketing

Marketing was identified as a challenge by 4 out of 32 respondents (12.5%). Respondents with <500 head were most concerned of the three groups (4 out of 12 respondents or 33.3%). Communication was noted as important to increase awareness of your business, build relationships, and have scheduled dialog on project updates and issues.

Building relationships with organizations like Firesafe Councils were noted in helping build community funding for targeted service grazing for CalFire Fuel Reduction grants. Communication can lead to developing a project on contiguous land with several different property owners. One business put together such a project with community stakeholders including fire department, school, land conservancy, private landowners, and a foundation.

Public Education and Animal Welfare

Public education and animal welfare were identified as a challenge by 15 out of 32 respondents (46.8%). Public education to the general public, private and public landowners, and agencies is needed. Topics suggested were on understanding the scope of targeted grazing to overcome the paradigm of getting free grazing, benefits, impacts, reduction in fuel loads, ecology of the area, basic small ruminant education, and what to expect with project implementation.

Education through public interaction can occur through direct contact, comments submitted to whoever is doing the project, and through social media. Communication is important as many times the public is watching as grazing occurs. Developing talking points on the topics above can help the public better understand and appreciate what is happening on the project and justifies the value of the targeted grazing service.

Public concerns over welfare were health related regarding sick, lame, and dead animals. It was noted the need for quick action to take care of these things immediately. Provider concerns on projects in public areas included: companion dogs not on a leash, touching the electric fence, public feeding the sheep or guard dogs, animals getting out, and theft

Animal Production and Husbandry

Animal production, husbandry, and training were identified as a challenge by 15 out of 32 respondents (46.9%). Animal performance may be reduced on a project. Lambs will not gain as well, breeding cycle timing may be impacted, and mature animals may decline in body condition. Nutritional status should be monitored monthly by assessing body condition. Thin animals should either be supplemented or removed from the project. Stress can impact animal performance through constant moving in a project or moving to a new one.

Small ruminant animal husbandry training for inexperienced personnel was noted as important. Personnel need to gain competence seeing and addressing health concerns before they become big problems. They need to be able to understand nutrition and grazing and know appropriate actions to take with thin animals. Improving stockmanship skills is important to reduce animal stress in moving animals within a project along with loading for transport to a new area. Personnel need to acquire understanding of plant ecology, managing grazing, and setting up and troubleshoot electric fences.

Operations

Operations was identified as a challenge by 13 out of 32 respondents (40.6%). Securing a reliable home base large enough in acreage to support animals during the five to seven months non project part of the year is essential. This can occur with either owned and/or leased land. Lack of a reliable home base can be a real weakness for a targeted grazing service business. One business said they had gone five years without one. Alfalfa stubble has been an important part of a home base for many sheep operations. Conversion of alfalfa ground to nut crops has reduced available alfalfa acres for small ruminant grazing.

Predator control is a major issue for any targeted grazing service business. Guard dogs and llamas were used by providers. Guard dogs are the most effective but do come with management challenges on projects. These include barking complaints, getting out of the paddock they are in, and may not be allowed in habitat for a threatened wildlife species.

Vandalism can be another major issue for businesses. One provider said they were likely to have theft of animals at night during a rainy storm and the homeless population was cutting fence and letting animals out. Another business estimated theft loss at \$450 million over the last ten years.

Scheduling and logistics is a challenge as everyone wants their project done at the same time in the spring. Scheduling considerations are project goals, location, and duration. Logistics includes transportation, labor including housing and food for a herder, and onsite management.

Implications

California is experiencing a wildfire crisis. The state's fire season is now almost year-round. More than 25 million acres of California wildlands are classified as under very high or extreme fire threat. Approximately 25 percent of the state's population – 11 million people – lives in that high-risk area. Fire season in California has become a year-round issue. CalFire's list of the Top 20 California Wildfires reveals that 8 of those fires have occurred since 2017 (https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf). Demand will continue to grow from agencies private landowners throughout California as fire risk increases.

Targeted service grazing saves important ecosystems and neighboring cities and towns that may be threatened by wildfire by reducing vegetation before it becomes a hazard. Critical needs exist for new targeted grazing businesses, expansion of existing ones, keeping labor costs reasonable, training new herders, and public and private education.

Demand for targeted service grazing will continue to grow.

The CalVTP (California Vegetation Treatment Program) EIR was developed in 2019 to help public agencies to streamline CEQA requirement in order to proceed with fuel load reduction activities to reduce wildfire risks. It defines reduction types as wildland urban interface (WUI), fire breaks, and ecological restoration. Treatment activities for these types are prescribed burning, mechanical, manual, herbicide, and prescribed herbivory (targeted grazing). These activities would be used in treating 250,000 acres per year at a cost of \$200 million. The cost per acre would be \$800. The EIR states a recommended percentage use for each treatment activity and is shown in the table below.

Treatment Activity	% of total 250,000 treatment acres per year	Acres Treated
Prescribed Burning	50%	125,000
Mechanical	20%	50,000
Manual	10%	25,000
Herbicide	10%	25,000
Prescribed Herbivory (targeted grazing)	10%	25,000

California will need more targeted grazing service businesses and/or existing ones will need to expand to meet growing demand.

We can use the survey to make some assumptions on what level of expansion of number of targeted grazing businesses needed and/or expansion of existing businesses to graze the projected 25,000 acres. It would require 50 businesses with approximately 500 head of sheep and/or goats to graze 500 acres within six months for a new business.

A startup business would need approximately \$217,690 to purchase 500 head and necessary equipment to be at a scale to graze 500 acres in a six-month period (\$100,000 for livestock,

\$117,690 for equipment). These startup businesses would need to be managed by experienced people to produce satisfactory results. Startup businesses lacking experience may result in less favorable results. Alternatively, existing businesses would need to expand. Funding the expansion might occur through loans, private investment, public grant, or crowdfunding.

Limited number of herders that reside in the United States to manage the animals.

There are not enough people interested in becoming herders in the United States. Many of the few interested would lack experience and need extensive training. Most targeted grazing service businesses have overcome this by utilizing the H2A Guestworker program. California Assembly Bill 1066 (AB1066) primarily dealt with overtime for agricultural workers and removed the herder exemption from overtime due to the unique nature of their job. The increased overtime cost would cause sheepherder wages to rise 52%.

A training program through a community college for example would have the potential to work if they could recruit enough people to take course. Curriculum development, hands-on experiential labs, and internships with existing targeted service grazing businesses would develop knowledge, skills, and experience with grazing animals.