California State Assembly

AGRICULTURE

ROBERT RIVAS
CHAIR

Committee Office
1020 N Street
Room 362
Sacramento, CA 95814
(916) 319-2084

INFORMATIONAL HEARING

Wednesday, November 18, 2020
1:00 p.m. to 3:00 p.m. State Capitol, Room 4202

SUBJECT: Impact of Wildfire on California Agriculture

Background

Wildfires in California are continuing to increase in frequency and intensity, resulting in loss of life and damage to property, infrastructure, and ecosystems. This year alone, wildfires have burned more than 4.1 million acres. Six of the 10 largest recorded fires in California's history happened this year (August Complex, Mendocino Complex, SCU Lightning Complex, Creek, LNU Lightning Complex, North Complex). In 2020 there have been/are more wildfires in closer proximity to agricultural lands (Ag lands). While much of Ag land in the Central Valley has seen a limited impact, the Coastal ranges and foothill communities on the edge of the Sierras have seen greater impact to Ag lands, specifically in vineyards and grazing lands throughout the state.

California wildfires total acres burned 2015-2020:

- 2015: 893,362 acres
- 2016: 669,534 acres
- 2017: 1,548,429 acres
- 2018: 1,975,086 acres
- 2019: 259,823 acres
- 2020 as of 11/10: 4,359,517 acres

2020 Wildfire overlay on farmland map courtesy of CalFire: https://calfire-forestry.maps.arcgis.com/apps/View/index.html?appid=270716a831fe49cdb904052edd1802ef

WILDFIRE ECONOMIC IMPACT ON AGRICULTURE

The majority of the 2017-2018 fires were contained within the forests and non-agricultural land, but a number of rangelands, cannabis farms, dairy farms, citrus groves, avocado orchards, and vineyards were affected, making an impact on growers.

We have not received all the data of farm damages in 2020 wildfires or economic damages to farms. Based on the location of many of the fires, there may be a bigger impact on Ag lands compared to 2017-18.

Wine:

Unlike the 2017 fires where most of the wine crop had already been harvested, 2018 saw California's most severe fires up to that time, which spread just before or at the onset of ripening, when grapes soften and change color.

Grapes are vulnerable to smoke damage because of their permeable skin. Depending on fire intensity, length of smoke exposure and stage of vine growth, unharvested grapes can take on smokey, ashy, or bitter characteristics. Consumers find this "smoke taint" unappealing.

While only a small percentage of wines may have been affected by fires and smoke, and these undesirable characteristics of smoke taint can be managed, winemakers do have to take on added costs in eradicating these flavors to avoid disappointing wine drinkers.

In 2020, the Glass Fire burned buildings at some of the region's most celebrated wineries and vineyards. Ultimately, 27 properties saw structural damage. The 2017 fires burned six Napa wineries. The Spring Mountain district was particularly hard hit.

The larger concern is around smoke taint. Smoke taint occurs when wine grapes and fruit are exposed to smoke during the growing season or during fermentation. The "taint" produces undesirable flavors ranging from "wet ashtray" to "sweaty socks" and are undetectable when tasting the fruit. These flavors (also known as phenols) may then be released during the fermentation process that enables even a small batch of smoke tainted fruit to contaminate an entire batch. (https://ucanr.edu/sites/fire/Recovery/Vineyard/)

Smoke related issues fully develop with as little as a 30% smoke obscuration exposure for 30 minutes. While there are no known ways to remove smoke taint from the final product, there are tests available to detect the phenols associated with smoke taint. Because of the high risk of contamination from just one batch of bad grapes, if there is reason to believe smoke exposure is present, any vineyard or orchard fruit that will be fermented should be tested. (https://ucanr.edu/sites/fire/Recovery/Vineyard/)

For wine in 2020, smoke taint may have a major impact on the industry, from the growers to the wine maker.

Livestock Rangeland:

The wildfires had an impact on the region's farms and ranches, burning buildings, and grazing land for dairy cows, cattle, horses, and other livestock. Butte County, where the 2018 Camp Fire raged, suffered rangeland losses of 30,000 to 40,000 acres, displaced animals, and destroyed pens, corrals, barns and more.

The Thomas Fire impacted all 7,000 acres of rangeland stewarded by the RA Atmore & Sons and Rancho Ventura Conservation Trust.

> "*Many of the oak woodlands were lost to the fire, as well as cattle, miles of fences, and other ranch infrastructure. The grasses and other vegetation are coming back. We will be battling invasive and noxious weeds now more than ever. We will need to adaptably manage woody species within the rangeland to achieve realistic goals that serve to improve forage, enhance wildlife habitat and protect our urban neighbors from the devastating effects of wildfire. One thing we learned from the Thomas Fire was "it's not a matter of if the next Thomas Fire will come; but when*." Richard Atmore, Ventura County Annual Crop and Livestock Report, 2017

Fruits & Vegetables and the Thomas Fire:

Ventura County, home to 118,000 acres of prime farmland and more than one-half of the total harvested acreage in the country for avocado, lemon, celery, and strawberries, was hit particularly hard during the 2017 Thomas Fire. The fire inflicted severe damage on hillside ranches, consuming forage needed for livestock, destroying barns, irrigation systems, equipment and machinery, and scorching or incinerating several thousand acres of avocado and citrus trees.

> "*We estimate that we lost 80% of our avocado crop for this year and next. At this point, four months after the fire, we project that over 40% of our avocado trees are dead or unlikely to recover fully. That is over 60 acres. Avocados take several years to come into full production. Even if we could replant right away, we are looking at about 6 years to full recovery. Realistically, if we replant everything to avocados, it will be many years before we can get back to 2016 production levels*." Deborah Brokaw, Jackson Brokaw Ranch Company (Source: Ventura County Annual Crop and Livestock Report, 2017)

The 2020 fire season deals mounting uncertainties for ranchers about where to place their livestock and how to sustain them.

Total statewide losses and damages for ranchers remain unknown, as recovery and assessments continue in burned areas, but initial estimates are starting to emerge in areas where fires are contained.

For example, cattle, forage and ranching infrastructure losses from the SCU Lightning Complex fire, which burned 396,624 acres of primarily rangeland in Alameda, Santa Clara, San Joaquin, Merced, Contra Costa and Stanislaus counties, reached an estimated $68.2 million, according to an initial "conservative" assessment by the University of California.

In their calculations, UC Cooperative Extension Livestock and Natural Resource Advisors, Theresa Becchetti and Sheila Barry, reported that damaged or destroyed fencing represented the biggest financial loss, at $33.3 million. They estimate cattle losses at more than $20.2 million, which includes deaths and production losses, and forage damage at $18.4 million. Other losses include $14.5 million for stock ponds and water systems, and more than $1 million for corrals. Their assessment did not include damage or losses to roads, cabins, barns and other buildings. (https://www.agalert.com/story/?id=14419 California Farm Bureau Federation)

AGRICULTURAL BASE MITIGATION

Targeted Grazing:

According to the Targeted Grazing Handbook, “targeted grazing is the application of a specific kind of livestock at a determined season, duration and intensity to accomplish defined vegetation or landscape goals…. The major difference between good grazing management and targeted grazing is that targeted grazing refocuses outputs of grazing from livestock production to vegetation and landscape enhancement.”

Targeted grazing contractors typically provide the livestock, fencing, herders, livestock watering equipment, predator protection, and other infrastructure necessary. By managing the type and number of animals, the duration of grazing, the season and frequency of grazing, and the spatial distribution of livestock, targeted grazing can help landowners and managers achieve a variety of land management goals.

Well managed targeted grazing can be used to address site specific landscape goals. Targeted grazing can impact specific invasive weeds by controlling competing vegetation at specific times, targeted grazing can enhance habitat restoration efforts. Targeted grazing can reduce fine fuels and ladder fuels to reduce wildfire danger in some environments.

Timing of targeted grazing for fuel reduction is also a critical consideration. To reduce the potential for regrowth, fuel reduction grazing should be done after the last spring rain. Since the nutritional quality of annual grasslands typically declines rapidly at this time of year, targeted grazers may need to

provide supplemental nutrition to ensure appropriate impact to targeted vegetation. In some instances, cattle may be the most appropriate species for particular projects.

Agricultural land and firebreaks

Wildfire is a widespread natural hazard that is expected to increase in extent, severity and frequency with ongoing changes in climate and land-use. One tool that has been used in an effort to reduce the damage caused by wildfires is green firebreaks: strips of low-flammability vegetation grown at strategic locations in the landscape. Green firebreaks are increasingly being recommended for wildfire management and have been implemented in many countries.

Agricultural lands are well suited to act as firebreaks, especially irrigated lands or lands that have implemented fire precaution programs. While there is very little that can stop a fast wind driven fire, there were many incidents in this past year were fire was slowed or went around certain types of Ag land. By looking to expand existing Ag land preservation or incentivizing landowners to adopt practices that help slow the spread of wildfire agriculture can not only protect Ag land, but also offer additional mitigation at the rural/urban interface.

FARMERS AND RANCHERS HAVE AVENUES OF RELIEF

The U.S. Federal government plays a significant role in assisting farmers and ranchers with financial losses caused by natural disasters through the USDA's Farm Service Agency.

- **Non-Insured Crop Disaster Assistance Program (NAP)** – provides financial assistance to producers of non-insurable crops when low yields, loss of inventory, or prevented planting occur due to natural disasters including excessive wind and qualifying drought (includes native grass for grazing). Eligible producers must have purchased NAP coverage for 2017 crops. A notice of loss must be filed within 15 calendar days of when the loss is apparent or 15 calendar days after the normal harvest date.

- **Livestock Indemnity Program (LIP)** – offers payments to eligible producers for livestock death losses in excess of normal mortality due to adverse weather. Eligible losses may include those determined by FSA to have been caused by wildfires, hurricanes, floods, blizzards, tropical storms, tornados, lightning, extreme heat, and extreme cold. Producers will be required to provide verifiable documentation of death losses resulting from an eligible adverse weather event and must submit a notice of loss to their local FSA office within 30 calendar days of when the loss of livestock is apparent.

- **Tree Assistance Program (TAP)** – provides assistance to eligible orchardists and nursery tree growers for qualifying tree, shrub and vine losses due to natural disasters including excessive wind and qualifying drought.

- **Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program (ELAP)** – provides emergency relief for losses due to feed or water shortages, disease, adverse weather, or other conditions, which are not adequately addressed by other disaster programs. ELAP covers physically damaged or destroyed livestock feed that was purchased, or mechanically harvested forage or feedstuffs intended for use as feed for the producer's eligible livestock. In order to be considered eligible, harvested forage must be baled; forage that is only cut, raked or windrowed is not eligible. ELAP also covers up to 150 lost grazing days in instances when a producer has been forced to remove livestock from a grazing pasture due to wildfire; and for beekeepers, ELAP covers beehive losses (the physical structure) in instances where the hive has been destroyed by a natural disaster including flooding, high winds and tornadoes. Producers must submit a notice of loss to their local FSA office within 30 calendar days of when the loss is apparent.

- **Emergency Loan Program** – available to producers with agricultural operations located in a county under a primary or contiguous Presidential or Secretarial disaster designation. These low interest loans help producers recover from production and physical losses.

- **Emergency Conservation Program (ECP)** – provides emergency funding for farmers and ranchers to rehabilitate land severely damaged by natural disasters; includes fence loss.

- **HayNet** – is an Internet-based Hay and Grazing Net Ad Service allowing farmers and ranchers to share 'Need Hay' ads and 'Have Hay' ads online. Farmers also can use another feature to post advertisements for grazing land, specifically ads announcing the availability of grazing land or ads requesting a need for land to graze.