

# READY, SET, GO!

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Wildfire Preparedness for  
Farmers, Ranchers and Growers



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## Wildfire Preparedness for Farmers, Ranchers and Growers. Saving Lives and Personal Property Through Advance Planning.



Bob Roper, Ventura County Fire Chief

**A**griculture is a key component in the economy of Ventura County. The crops and livestock grown by the county's farmers, ranchers and growers have an annual value of almost \$2 billion. The farms and ranches employ thousands of people and the industries that support them – packing houses, trucking companies and others – employ thousands more. Protecting the county's agricultural assets is a key goal of the Ventura County Fire Department.

Wildfire is a major threat to agriculture in Ventura County. Most of our agricultural properties are located either immediately adjacent to natural vegetation or within a mile of it, an area we refer to as the Ember Zone. These properties are all at risk from the flaming front of an advancing wildfire or the embers it produces. The purpose of this brochure is to give farmers, ranchers, livestock operators and growers the information they need to protect their businesses and homes against the threat of a wildfire.

The Ventura County Fire Department is committed to helping you protect your property against a wildfire. But we know that when a major wildfire occurs, we simply will not have enough fire engines and firefighters to protect every property, especially during the very early stages of the fire. We need property owners to do their part to protect their own assets. This means providing us with defensible space, where possible. And it includes maintaining fire roads and fire breaks, marking buildings and water supplies, upgrading bridges and clearing farms, ranches and orchards of materials that could be susceptible to embers.

This brochure will explain the measures farmers, ranchers and growers can take to help ensure the safety of their property in the event of a major wildfire. Wildfires are a year-round possibility in Ventura County, so it is not a matter of if, but when the next fire will occur. The preparations you make now may save your home, property and business.

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Row crops are not usually at risk from wildfires, but firefighters often access the fires through fields near natural vegetation.

#### VENTURA COUNTY FIRE DEPARTMENT

If you have an emergency, call 911

Public Information Office: 805-389-9769

Wildfire Hotline (during major wildfires only): 805-388-4276

Web site: <http://fire.countyofventura.org>

<http://vcreadyssetgo.org>

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and Growers is endorsed by:



## Ready, Set, Go!

### Begins with Property that Firefighters can Defend

### Defensible Space Works!

**D**efensible space is a buffer zone that is created when weeds, brush and other natural vegetation are removed between a wildland area and assets at risk from a wildfire. It gives firefighters a place to operate between the asset and an advancing wildfire. In a suburban setting, this is usually a straightforward matter of weed abatement. But defensible space takes on different characteristics in an agricultural setting.

Farm and ranch properties may require very large areas of defensible space due to the surrounding vegetation and topography. Additionally, agricultural assets such as feed, packing boxes, stakes, drip tape, mulch and fuel supplies are particularly susceptible to flames or wind-driven embers. Livestock and equipment can also be at risk. As a result, farmers, ranchers and growers must carefully assess their property, paying particular attention to fire history and topography, to determine how much defensible space is desired. Local engine companies can assist in this risk assessment.

Defensible space can be created by removing flammable vegetation that is next to assets at risk. In addition, the impact on assets can be reduced by using fuel breaks, strategic grazing and landscaping with non-combustible materials and fire-resistive plants.

Defensible space is an important tool against an advancing wildfire, but it is not enough. Special attention must also be given to wind-driven embers that are carried ahead of the flaming fire front. These embers can carry short distances (100-200 ft.) under typical daily wind conditions, or more than a mile under strong Santa Ana winds.

Farmers, ranchers and growers must be aware of the dangers flying embers pose to their homes, farm or ranch structures, and other assets. Embers that land in interior portions of orchards, on roofs, in feed storage or near fuel or hazardous material storage can start deadly and destructive fires.

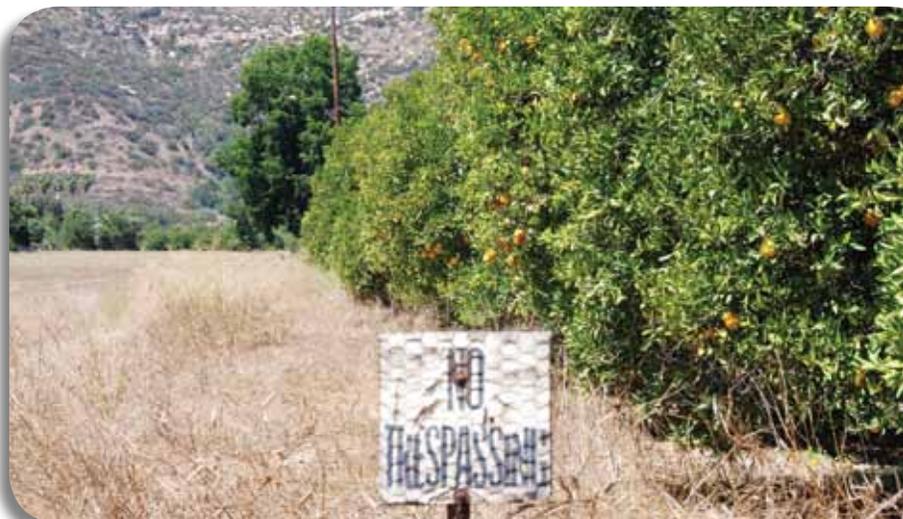
Ready, Set, Go! begins with property that firefighters can defend.



Defensible space around the property can help protect homes, barns and agricultural assets.



Fire-resistant construction along with defensible space can help protect against ember intrusion.



Defensible space provides a buffer zone between natural vegetation and assets that must be protected. The lack of defensible space can carry a fire into an orchard.

**W**ildfire is now a year-round reality in Ventura County and the areas most at risk may be farm and ranch properties. Many agricultural properties border natural areas, have access challenges and assets that are difficult to protect from an advancing wildfire. This *Ready, Set, Go! for Farmers, Ranchers and Growers* brochure is designed to help farmers and ranchers meet those challenges and protect their property and livelihood.

Ready, Set, Go! is an award-winning, three-step program designed to help property owners prepare their property and families against the threat of wildfires. Ready – teaches how to create defensible space and use fire-resistant landscaping and construction. It also shows how to assemble emergency supplies and prepare evacuation routes. Set – teaches property owners situational awareness during fire weather (early preparations to property, assembling the belongings to take if evacuated, monitoring property for embers and monitoring the media for fire updates). Go! – encourages property owners to leave early, well before the fire arrives. But for many farmers and ranchers,

wildfires threaten their businesses as much as their lives. This brochure addresses the additional measures they can take to help keep a wildfire from destroying their homes, property and businesses.

It is critical to understand that agricultural properties may be at risk from a wildfire even if the fire itself is some distance away. Numerous studies have shown that much of the property loss suffered during wildfires is the result of ember fallout or intrusion and not from the fire itself. In a wind-driven wildfire, typical during Southern California's Santa Ana season, winds can carry embers a mile or more ahead of the main body of the fire. This brochure will help farmers, ranchers and growers assess their risk from wildfire embers.

For more information on emergency supplies, home and structure preparation, and evacuation planning, please visit the **Ready, Set, Go!** website at <http://vcreadyssetgo.org>, or see the **Ready, Set, Go! Wildfire Action Plan** brochure that is available at all Ventura County fire stations and on the website.

## Orchards and Groves

**F**ruit trees are susceptible to damage from wildfires in two ways: crop damage or loss from flame impingement or heat; and long-term damage or loss from burned or dying trees. A wildfire driven by wind can overcome an orchard destroying both fruit and trees in the process.

Activating the irrigation systems can be extremely effective in preventing a fire from spreading into a grove or starting spot fires in the interior of the grove. For best results, the systems should be activated well ahead of the arrival of the fire to ensure the leaf litter is thoroughly soaked. High winds may cause power companies to shut off power in certain areas, so it is critical to soak the leaf litter while there is still power to the pumps.

The best method to prevent an advancing wildfire from reaching an orchard or grove is defensible space. Defensible space provides firefighters with a buffer zone between the fuel (natural vegetation) and the property to be protected (farm house, barn, orchard, etc.). Adequate defensible space allows firefighters to use water or retardant drops, backfires, bulldozers or other methods to keep the fire from reaching the property. Defensible space is particularly important on the side (or sides) of the property where a wind-driven fire is mostly likely to occur.

As part of its Fire Hazard Reduction Program, the Ventura County Fire Department requires homeowners living in the Wildland Urban Interface (WUI), the area where development meets natural vegetation, to create 100 feet of defensible space from all structures. For people living in rural areas, the department recommends at least the same amount from farm houses, barns and other large structures. The amount of defensible space recommended around orchards is more difficult to determine.

The department recognizes the need of farmers and ranchers to maximize the use of their property for crop production and that defensible space, by definition, takes some land out of production. The amount of defensible space needed to protect a particular orchard will be dictated by a number of factors, including: the type of tree; the condition of the orchard (weeds between rows, stacked firewood, dead trees, etc.); orientation to the wind; surrounding natural vegetation; and topography. The department will work with individual growers to help them determine the best methods for providing defensible space on their property.



Trees and fruit can be damaged by direct flame contact or radiant heat.



Growers must also be aware of the danger to their orchards from embers. Embers from wind-driven wildfires often fall to the ground more than a mile in front of the advancing fire itself. Embers can start “spot fires” well ahead of the main body of the fire and they can also land on roofs or in orchards, starting fires there. Orchards and groves should be patrolled to look for spot fires. If found early, they can often be easily controlled.

Orchards with heavy weeds between the rows, or avocado orchards with a thick mat of leaves, twigs, broken branches and low limbs are susceptible to ground fires within the orchard itself. Slow-moving fires can cause tissue damage in avocado trees, killing them if the damage is severe. These fires can also attack the tree trunks. When exposed to fire, the bark from ground level to about two feet high can become so hot that the cambium (the layer between the bark and wood) is killed. When the cambium is killed, the tree is girdled and it will die.

Leaf litter, twigs and dead branches can help carry a fire into a grove damaging trees.

Woodpiles in and around orchards and groves can serve as a landing zone for wind-driven embers and help to carry a fire into an orchard or grove.

## To prepare for a wildfire, growers should:

- Remove leaf litter, twigs and weeds from around tree trunks for a distance of two to three feet.
- Prune low-lying limbs.
- Clean the orchard of dead branches, firewood and other combustible material. Piles of wood near a trunk can turn a survivable scorching into a fatal burn to the tree.
- Create defensible space around the orchard.
- Remove any piles of brush or other combustibles that have accumulated around the orchard.
- Have spare gate keys, combinations and property maps available for firefighters. A clearly marked box, similar to what Realtors use, can be installed near the property entrance during times of high fire danger.
- Clearly mark water tanks, ponds and other water supplies available for fire department use.
- Clearly mark roads that firefighters might have to use. Firefighters unfamiliar to the area may respond to your property in the middle of the night. Marking roads will help prevent them from become lost or stuck.
- Reinforce bridges to make them capable of supporting the weight of a fire engine or heavy-duty bulldozer and clearly mark weight limitations at the bridge site. If bridges on the property cannot support heavy weights, clearly mark alternate routes around them.
- Prune trees and vegetation back from roads so fire engines have access to the entire property. The height standard for clearance is 13.5 feet.
- Create a safe zone clear of all vegetation for farm equipment.
- Properly mark all storage areas used for chemicals or hazardous materials.

## If a wildfire is approaching, growers should:

- Apply sprinkler water for as long as possible in advance of the fire’s arrival.
- Monitor property for small fires started by embers.
- Monitor mulch piles.
- Monitor storage areas for embers landing near pallets, boxes, etc.



Dead trees and orchards overgrown with weeds can carry a fire deep into a grove, damaging both fruit and trees.



Well-maintained firebreaks and roads can help stop the spread of a fire through an agricultural property.



Moving livestock to previously grazed areas will help protect them against an advancing wildfire and grazed pastures can also act as defensible space.



Farm and ranch equipment are vulnerable to wind-driven embers. Locate equipment in areas that have been cleared of vegetation and then monitor for spot fires.



Repair and maintain bridges. If the bridges cannot support the weight of a fire engine or bulldozer, clearly mark routes around the bridge.



Well-grazed pastures can provide a relatively safe haven for livestock because the remaining fuel will not carry a fire.



## Rangeland and Livestock Operations

**L**ivestock operations in Ventura County are at high risk from wildfires because of their more remote locations and the generally lighter fuels (vegetation) on grazing land that can carry an advancing wildfire very quickly. It is often impossible for many ranchers to evacuate their livestock due to the number of animals they have or their location on the property. Because of these things, ranchers must work diligently to prepare their property and make contingency and evacuation plans for both people and livestock.

In the case of livestock operations, it is often not feasible to evacuate large numbers of livestock. As a result, operators should consider establishing relatively safe havens for their animals. One way this can be accomplished is through rotational grazing. Intensive-managed grazing near ranch houses, barns or equipment areas can provide defensible space for those assets and create an area where livestock can be held away from the main body of the fire. Remaining vegetation in well-grazed areas will not usually carry a fire and spot fires can be easily controlled. By using grazed pastures as defensible space during high fire season, livestock operators can then open gates should a fire occur to allow livestock to transition from pastures where they are feeding to the grazed area where they can be better protected.

### To prepare for a wildfire, livestock operators should:

- Know the fire history and typical fire behavior for the area. Concentrate preparations on the areas of the ranch where a fire is most-likely to approach the property.
- Establish and maintain firebreaks around pastures.
- Create defensible space around all structures, including barns and hay sheds.
- Reinforce fences with metal posts, if necessary.
- Create a safe zone clear of all vegetation for ranch equipment.
- Clear vegetation around fuel tanks.
- Create a livestock evacuation plan.
- Ensure proper registration and branding of livestock.
- Establish a contingency plan for feeding livestock if grazing land is destroyed by fire.
- Make sure location of house and available water supplies are well-marked for firefighters.
- Have spare gate keys, combinations and property maps available for firefighters.
- Clearly mark water tanks, ponds and other water supplies available for fire department use.
- Reinforce bridges to make them capable of supporting the weight of a fire engine or bulldozer and clearly mark weight limits or unsafe bridges. Mark alternate paths around the bridges if they are incapable of supporting heavy weights.

### If a wildfire is approaching, livestock operators should:

- Open and/or unlock gates so livestock can escape flames and firefighters have easier access. If time allows, relocate livestock to ranch areas with lighter fuels or with well-maintained firebreaks or other defensive measures.
- Hook up and load stock trailer to evacuate particularly valuable animals (saddle horses, breeding stock, etc.), if necessary.
- Move equipment into a safe zone.
- Close all doors and windows and turn on lights in barns and other structures.
- Shut off propane tanks.
- Evacuate family members, pets, valuables and other personal possessions to a safe area as soon as possible.
- Monitor property for small fires started by embers.
- Monitor manure piles and hay storage.

## Row Crops

In most cases, row crops are not at high risk from a wildfire. But because many farms growing strawberries, celery, peppers and other crops are in close proximity to natural vegetation, farm workers, buildings and equipment could be in danger. And, because many row crop farms are near wildland areas, they may also serve as access points for firefighting efforts.

Damage from wildfire is usually relatively minor in row crops. Damage is typically caused by radiant exposure to extreme heat and tends to affect only the rows closest to the flames. Due to the nature of the crops, embers are rarely a problem in these fields. However, embers can cause a large risk to farm equipment and supplies such as wooden stakes and boxes.

Farmers should take the same precautions around farm buildings that are recommended for homeowners in the WUI. This includes defensible space around the farm house and other structures, emergency supplies and evacuation plans.

### To prepare for a wildfire, farmers should:

- Store boxes, stakes and other combustible farm supplies safely, including leaving fire breaks between the stacks.
- Create a safe zone clear of all vegetation for ranch equipment.
- Clear vegetation around fuel tanks.
- Have spare gate keys, combinations and property maps available for firefighters.
- Properly mark all storage areas used for chemicals or hazardous materials.
- Create evacuation plans for family and farm workers.

### If a wildfire is approaching, farmers should:

- Monitor property for small fires started by embers.
- Monitor mulch piles.
- Monitor storage areas for embers landing near pallets, boxes, etc.
- Monitor piles of irrigation tape, bed covering and other combustibles.
- Stay alert to fire and weather conditions and evacuate farm workers.

### Agricultural Pass Program



Working with the Ventura County Sheriff's Office, Farm Bureau and other agencies, the Ventura County Fire Department has developed the Agricultural Pass Program – Ag Pass – to assist farmers, ranchers and growers when evacuations have been ordered due to wildfires.

Ag Passes can be ordered for key workers to assist in protecting farm property. The passes allow workers to go through law enforcement checkpoints during voluntary evacuations. Pass holders are given the same access as residents in affected areas. They do not allow workers into areas where mandatory evacuations have been ordered.

Ag Passes can be obtained from the Farm Bureau of Ventura County.

### Wildfire Resources for Farmers, Ranchers and Growers

#### Ventura County Fire Department

Ready, Set, Go! Website: <http://vcreadysetgo.org>  
Vegetation Management Officer: (805) 388-4589  
Local Fire Station: (805) 371-1111 ext. Station Number

#### Farm Bureau of Ventura County

(Ag Passes and other Information)  
(805) 289-0155  
[admin@farmbureauvc.com](mailto:admin@farmbureauvc.com)

#### Ventura County Agricultural Commissioner

669 County Square Dr.  
Ventura, CA 93003  
(805) 477-1620  
[Ag.commissioner@ventura.org](mailto:Ag.commissioner@ventura.org)

#### Central Ventura County Firesafe Council

[cvcfiresafecouncil@hotmail.com](mailto:cvcfiresafecouncil@hotmail.com)  
Assistance with developing detailed property maps and contact lists.

#### Ventura County Cattlemen's Association

[c.burdette@att.net](mailto:c.burdette@att.net)  
List of members who might be available to assist in evacuating livestock.

#### Ventura County Animal Services/Evacuation Centers

[info@vcar.us](mailto:info@vcar.us)  
600 Aviation Dr.  
Camarillo, CA 93010  
(888) 223-7387



Clearly mark water tanks, hydrants and ponds so firefighters can use them to protect the property.



Radiant heat from wildfires generally only threatens the outside rows of crops being grown in the field. But embers can attack farm equipment and supplies.



During times of high fire danger, equipment should be moved to an area clear of vegetation. Grass, leaf litter and other combustibles can carry a fire into equipment.



Locked gates can prevent livestock from escaping an advancing wildfire and slow down the response of firefighters.



Signs and maps can help firefighters from other jurisdictions find difficult to locate addresses.

## Ready, Set, Go!

### Checklist for: Farmers, Ranchers and Growers

#### Ready (Before a fire occurs)

##### Prepare Your Family

- Create a Wildfire Action Plan that includes meeting locations and communications plans and rehearse it regularly.
- Know your evacuation routes and have more than one from both your primary residence and headquarters.
- Assemble an emergency supply kit as recommended by the Red Cross.
- Keep an emergency supply kit in all ranch and personal vehicles.

##### Prepare Your Property

- Make sure your property address is clearly marked (not just a mailbox at the road). Provide directional signs to the house, barn or other structures if necessary.
- Establish and maintain firebreaks around pastures, orchards and structures.
- Create defensible space around all structures.
- Reinforce fences with metal posts, if necessary.
- Create a safe zone clear of all vegetation for equipment.
- Clear vegetation around fuel tanks, propane tanks, storage areas and other combustible materials or equipment.
- Properly mark all storage areas used for chemicals or hazardous materials.
- Clearly mark water tanks, ponds and other water supplies available for fire department use.
- Reinforce bridges to make them capable of supporting the weight of a fire engine or bulldozer and clearly mark weight limitations and unsafe bridges.

**Remember:** During a major wildfire, the fire engines responding to your property might be from other jurisdictions and may not have any local knowledge. Clearly marked addresses and water supplies will save valuable time.

##### Prepare Your Livestock and Animals

- Create a livestock evacuation plan.
- Ensure proper registration and branding of livestock.
- Establish a contingency plan for feeding livestock if grazing land is destroyed by fire.

#### Set (As the fire approaches)

- Monitor radio, television or Internet for fire and weather updates.
- Monitor your property and surrounding areas for ember fallout and small spot fires.
- Stay hydrated.
- Load vehicles with emergency supplies and valuables. Be ready to evacuate if ordered. Make sure all vehicles have emergency supplies in case you are separated from family or workers.
- Alert family and ranch workers to any changes in the situation.
- Turn on irrigation.
- Open and/or unlock gates so livestock can escape flames and to give access to firefighters.
- If appropriate, hook up your stock trailer and load particularly valuable livestock.
- Move livestock and equipment into safe zones that are clear of vegetation.
- Close all doors and windows and turn on all light inside and outside of homes, barns and other structures.
- Shut off propane tanks.

#### Go! (Leave early)

- Evacuate family members and non-essential workers as early as possible. Do not wait to see how the fire behaves. It may come very quickly and close evacuation routes.

**Remember:** If you have prepared your family, property and agricultural assets, the best thing you can do is evacuate and let the firefighters do their job. If you choose to stay, you must know that severe fire behavior could prevent firefighters from rescuing you or your family.

#### If you are trapped by fire or unable to evacuate:

- Wear appropriate clothing – long sleeves and pants made of natural fibers such as cotton. Boots, gloves, hats, goggles and bandanas are also helpful against smoke and embers.
- Stay hydrated.
- Patrol buildings and property for spot fires. Pay special attention to interior areas of orchards where embers may go unnoticed. Fill sinks and tubs with water as an emergency supply.
- Bring hoses inside to protect them from ember damage.
- Take refuge inside a structure, away from outside walls.
- Place wet towels under doors to keep smoke and embers out.
- After the fire has passes, check the roof and patrol the property to extinguish small fires. Look for livestock that may have been injured trying to escape the flames.
- Call 9-1-1 if the fires are too large or too many for you to handle.