

Home & Garden Pest Newsletter

How Can Weed Control Help with Wildfire Preparedness?

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Volume 3, Issue 2 Summer 2023

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Produced by the Urban and
Community IPM Team of the
University of California Statewide
Integrated Pest Management
Program, with partial funding from
the USDA NIFA CPPM Extension
Implementation Program.

Wildfires are part of California's ecosystems, and they do not have to lead to the destruction of structures and livelihoods. Each of us can contribute to improving wildfire resilience, from individual homeowners and businesses to entire communities. Managing the vegetation and landscape around our homes can play a crucial role in preventing the spread of fires and sources of ignition.

Given the large amount of rain in the winter of 2022-2023, you might have experienced a surge in annual grasses and fast-growing plants that cover most of the ground around your home and community. In my area, I observed invasive species like wild oats and mustard growing rapidly in the spring, then drying out as summer approached (Figure 1). Dry vegetation poses a major threat to our homes and communities, both in terms of **ignition** (possibility of starting a fire) and **fire path** (creating ways for a fire to spread).

Understand fire risks

Fires require fuel to spread, and any combustible materials, including vegetation, wooden fences, or sheds can serve as fuel. Once ignited, these materials can create a direct fire path toward a residence. Fires also generate embers (small fuel brands transported by the fire plume or wind) that can ignite leaves or debris on roofs and gutters or penetrate directly into a building through vents. Embers can also accumulate near the



Figure 1. Mustard and other annual plants dry out at the beginning of the summer, creating fuel that could quickly burn during a fire.





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Figure 2. Weeds and other flammable materials next to fences can create a fire path to the siding or the eaves of a house.

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house, especially within the first 5 feet. You can reduce your home's exposure to flames and embers by implementing defensible space and home hardening strategies. Creating a defensible space involves managing the landscape around buildings (such as houses, sheds, detached garages) to prevent fires from reaching them. Home hardening focuses on improving building components, such as vents, roofs, and gutters, that could reduce exposure to flame and ember ignition. Though it can seem overwhelming to figure out where to begin reducing your home's fire risk, in this article I will walk you through a few simple, cost-effective recommendations that have been shown to make a difference.

Fires can start from weeds

How do we build a fire in a firepit? We start by adding the smaller kindling, and then the larger pieces of wood. Why? Because twigs and small branches are easy to ignite, they burn quickly, and they can be used to ignite larger logs. Similarly, **dry grasses and herbaceous plants are easier to ignite** than other types of vegetation such as big shrubs or trees.

Weeds can be ignited directly by flames, or by embers and sparks landing nearby. A mower hitting a rock or sparks from a power tool can easily ignite dry grasses around your property. Using the firepit analogy, ground fuels such as weeds serve as kindling to spread the fire to larger fuels nearby such as fences, decks, and shrubs. Therefore, removing weeds from vulnerable locations, such as near fences (Figure 2), is a very effective way to prevent ignitions around homes and communities, and reduce potential fire paths. It's easier to remove weeds while they are still green. This reduces the risk of ignition caused by mowers and prevents invasive species from reaching maturity and producing viable seeds.

Weeds and fire paths

In addition to being easy to ignite, dry grass and herbaceous plants can also create fuel continuity. Fuel continuity, or fire path, refers to the way

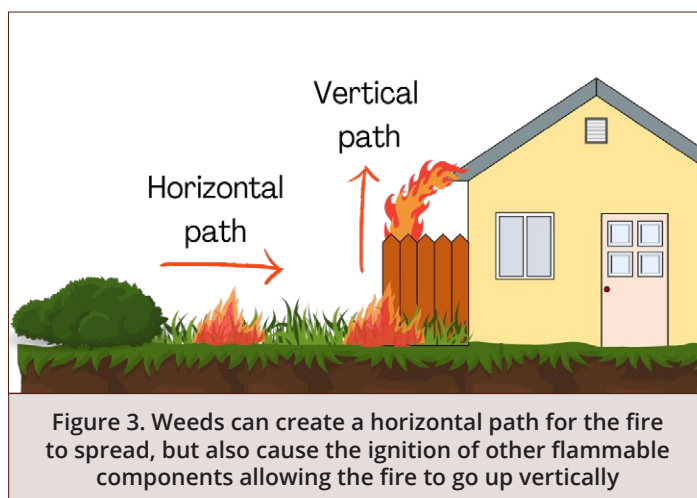


Figure 3. Weeds can create a horizontal path for the fire to spread, but also cause the ignition of other flammable components allowing the fire to go up vertically

L. Carmignani, UCCE

a fire could spread toward a building. There can be both *horizontal* and *vertical* paths (Figure 3). Weeds can provide horizontal continuity between shrubs or other combustible materials, increasing the intensity of a fire and bringing it closer to the house. Thus, it is important to create horizontal separations between groups of plants when maintaining vegetation. When burning grass ignites a fence, the fire “climbs up” from the ground, and if the fence is attached to the house, the fire can continue to climb. A fire can reach a building by using this vertical path, often called a “fuel ladder.” **The risk of fire spreading to your house can be significantly reduced by removing these potential fire paths**, starting with ground fuels like annual grass. However, other sources of ignition, such as embers, may create additional paths. It is therefore crucial to harden house components like vents (for example, by replacing their screens with a metal mesh of $\frac{1}{8}$ ” or smaller) and keep your roof and gutters clean.

What can you do?

Maintaining the landscape and vegetation around your home and community is crucial to preventing losses during a wildfire. Prioritize your actions to reduce the risk of ignition and fire spread around your home starting from the building and working outwards. Here are some recommended actions for creating and maintaining a fire-resilient landscape:

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- * Remove annual weeds and litter from vulnerable locations such as fences, sheds, siding, and under decks.
- * When mowing or removing grass, be careful of sparks from power tools or other machinery, especially near open areas. Make sure you have access to water in case of a fire emergency.
- * Break horizontal and vertical fire paths by removing weeds and other vegetation that are easy to ignite (grass, dead twigs, and dry leaves).
- * Prune lower branches of shrubs closer to the ground and clean their understory; trim lower limbs of trees that are close to other plants or buildings.
- * Mulch can be effective for weed control, but it is also flammable. Do not place mulch in vulnerable locations within the first 5 feet around a structure.
- * A fence creates a direct path for fires. If your fence is attached to your house, replace the last 5 feet with a noncombustible section or gate.
- * Install metallic 1/8" mesh screens on vents to prevent ember entry.
- * Regularly clean roofs and gutters, especially

near roof intersections.

- * Maintain your landscape throughout the year. Preventing the ignition of your home during a wildfire is possible, but it requires a combination of home hardening and defensible space strategies. For more information related to wildfire preparedness, check the additional resources below:

- * UC ANR Fire website: ucanr.edu/sites/fire/
- * Reducing the Vulnerability of Buildings to Wildfire: Vegetation and Landscaping Guidance: anrcatalog.ucanr.edu/Details.aspx?itemNo=8695
- * Wildfire home retrofit guide: readyforwildfire.org/wp-content/uploads/Wildfire_Home_Retrofit_Guide-1.26.21.pdf
- * Combustibility of landscaping mulches: naes.agnt.unr.edu/PMS/Pubs/1510_2011_95.pdf
- * Landscaping and home hardening: defensiblespace.org/

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Managing Weeds in Your Landscape

Weed management in landscaped areas can be difficult. Landscapes may include turfgrass, bedding plants, herbaceous perennials, shrubs, and trees. Usually more than one species is planted in the landscaped area, and there is often a mix of annual and perennial ornamentals. You will need to use several weed management options because of the great variety of ornamental species, soil types, irrigation systems, slopes, and use of mulches. You may also be concerned with the use of chemicals to control weeds and their effect on water quality, health, and non-target species if the herbicide moves offsite through runoff, drift, or other routes of exposure.

Because the choice of specific weed management tactics depends on the weeds present, and the types of turf or ornamentals planted in the

area, try to identify the weeds first. To help you with that, UC IPM has a Weed Photo Gallery and a key to identifying weeds as well as the *Weed Management in Landscapes* Pest Notes and pages on managing specific weeds. The general page for weed control resources is ipm.ucanr.edu/PMG/menu.weeds.html.



Jack Kelly Clark, UC IPM

Infestation of buttercup oxalis in a landscape bed.

Invasive Pest Spotlight: Brooms

The invasive pest spotlight focuses on emerging or potential invasive pests in California. In this issue we are covering brooms, a group of invasive shrubs.

Invasive Broom facts

Brooms are upright shrubs in the legume family that typically produce small, yellow, pea-shaped flowers. Shrubs range from 3 to 10 feet tall. They produce flowers from mid spring to summer and produce seed pods in late summer. All brooms are prolific seed producers, with a single shrub producing as many as 2,000 to 3,500 pods containing up to 20,000 seeds.

While brooms are attractive plants, they grow in dense stands that outcompete many native plants. These dense stands are highly flammable and increase the risk of wildfires. The most common species found in California are Scotch broom, French broom, Spanish broom, and Portuguese broom. Scotch broom is often found on interior mountains and on lower slopes in Northern California and is prevalent in the Sierra Nevada foothills. Without management, these plants can survive for about 12 to 17 years, producing thousands of seeds.

What can you do?

First, avoid planting any broom species. While most retailers do not sell the most common invasive brooms, many do sell hybrids that could become highly invasive in the natural landscape. There are similar-looking alternatives to brooms, such as forsythia and golden currant. Contact your local UC Master Gardeners or visit [PlantRight.org](https://www.plantright.org) for a list of other alternatives.



Barry Rice, UCB

French broom invading a hillside near Bodega Bay, California.

If you have brooms on your property and want to remove them, there are many different nonchemical and chemical methods that are effective in controlling these plants. These options are extensively detailed in the UC IPM publication *Pest Notes: Brooms* at ipm.ucanr.edu/PMG/PESTNOTES/pn74147.html.

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For more information about managing pests, contact your University of California Cooperative Extension office, or visit the UC IPM website at ipm.ucanr.edu.

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