

# the coastal gardener

quarterly newsletter

<https://ucanr.edu/sites/hdnmastergardeners/>



## Fire-wise Landscaping

—Birgitte Elbeck, UCCE Master Gardener

photo: UCANR

If your garden is on the coast, you might easily choose to bypass this article. Please read the closing paragraph on Coastal wildfire concerns before moving on to another topic, you may find it useful.

To the extent that the Humboldt and Del Norte Master Gardeners have a slogan, it is 'Right Plant Right Place.' Four little words to encompass all the considerations for predicting whether a plant will do well in a specific spot in your garden.

Typically, these considerations center around your particular location's climate and microclimate, soil, water, amount of sun, and the maintenance that you will be able to give the plant. These considerations are fundamental for creating a healthy and enjoyable garden. However, with the advent of increased wildfire activity in California and around the world, additional constraints are needed in your garden landscape in order to increase the odds

that your home will remain safe from wildfire. Satisfying all the constraints in a single season may feel too overwhelming, so you may want to initially pick some items to fix that you feel will make your specific situation safer. Home hardening efforts should always be considered alongside the Fire-wise enhancements to your garden, but this article will not cover those aspects.

### Basic principles for creating a Fire-wise & sustainable landscape

- Adhere to the evolving Defensible Space guidelines.
- Keep your garden's unique aspects in mind.
- Select all plants carefully and place them in locations that will give them adequate room to grow.
- Design for ease of maintenance.
- Communicate and cooperate with your neighbors.
- Do what is required by law. Scientific research on the new reality of wildfire

is ongoing; use science to inform your decisions.

### Defensible Space and placement of plants

The premise for fire-wise landscaping is quite simple: change the garden and landscape around the home in order to protect the structure. However, the implementation can sometimes be tricky, often involving cooperation with neighbors, and it always requires maintenance and vigilance over time to remain effective. Talking to neighbors

—continued on page 2

### INSIDE THIS ISSUE

Fire-wise Landscaping	p1
Advice to Grow By...Ask a Master Gardener	p4
Seasonal IPM Summer Guide for the North Coast Region	p5
Olla Irrigation	p6

# Fire-wise Landscaping

—continued from page 1

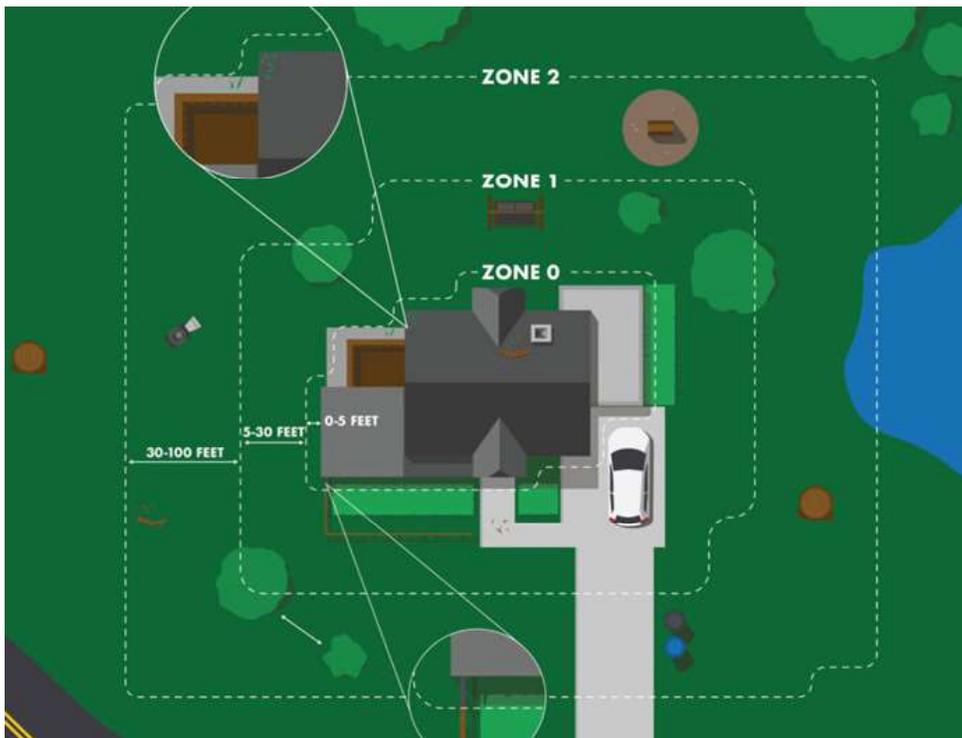
and coordinating within the immediate neighborhood should be an essential part of your efforts. Remember, by working together, you can create a safer environment for everyone in your community.

The concept of 'defensible space' is a cornerstone of fire-wise landscaping, as promoted by CalFire and other fire-related agencies. It involves managing zones of varying levels of fuel reduction, with the most stringent reduction near the home, and considering the relative placement of landscape components. This approach outlines prudent spatial landscaping constraints, particularly in rural settings with ample space and trees. Its primary focus is on halting the path of fire toward your house and ensuring the safety of firefighters operating in your vicinity during a fire. In your garden design, it is advisable to think in terms of 'islands' of plantings rather than continuous hedges or other plantings.

There are three zones to take into consideration.

- **Zone 0 is the first 5 feet out from the house, focusing on intense fuel reduction to protect against ember attacks.** Zone 0 is a recent addition, and you may still find websites, etc., that do not reference it. It was implemented after it became clear that an exceptionally large percentage of structure fires start from flying embers that get caught immediately next to a building. Such flying embers can come from a blaze that is a mile or more away, making it difficult to predict when and where embers will land.
- **Zone 1 covers from 5 feet to 30 feet.** The goal is to reduce fuel sources and includes removing all dead plants, leaves, and grass, pruning overhanging branches and flammable plants and shrubs near windows, allowing 10 feet between trees,
- **Zone 2 from 30 feet to 100 feet.** The goal of Zone 2 is to reduce fuel sources.

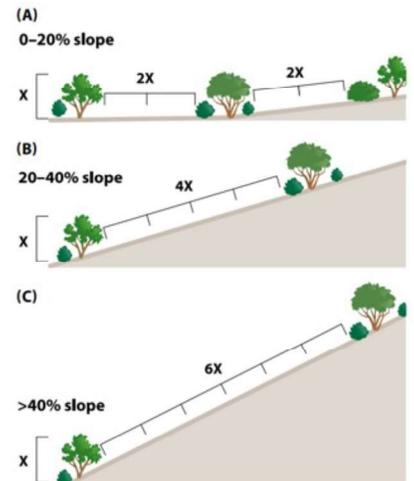
The illustration below shows the bands of zones. The defensible space rules are still evolving, and your best bet is to get updated information at [Defensible Space | CAL FIRE](#).



Defensible Zone Map, courtesy of Cal Fire. For more information about defensible space <https://readyforwildfire.org/prepare-for-wildfire/defensible-space/>

Plant spacing of grasses, shrubs, and trees is key in slowing the spread of wildfires. Spacing varies depending on the slope of the land, plant and tree type, and size.

Wildfires travel at different speeds based on many factors, but it is generally true that fire moves up-slope at a fast pace. If your home has a slope down from it, then you will need to pay attention to the spacing of trees and other plants. The steeper the slope, the more generous the spacing needs to be. Note in the sketches below that if there are bushy 'ladder fuels' under the trees, then the distance is not from one tree trunk to another, but instead from one 'island' to another.



Slope and distance between plantings.

## Vertical spacing

- Trim branches at least 6 feet from the ground.
- Increase vertical space between shrubs and trees to prevent the fire from climbing. For example, a 5-foot shrub near a tree will need 15 feet of clearance to the tree's lowest limbs.

## Horizontal spacing

- Is determined by the slope of the land.
- The steeper the slope, the greater the distance between plants/trees. See the illustration above.

—continued on page 3

## Fire-wise Landscaping

—continued from page 2

### Plant placement and maintenance are more important than plant attributes, and plant attributes are more important than specific plant species

As you have seen, Defensible Space is focused on spatial considerations. The specific plants for your Fire-wise garden should be chosen based on their physical characteristics and on the amount of care that you plan to give them. Keeping up with irrigation, pruning, and leaf litter cleanup is essential, even with plants that are less fire prone. All plants can burn, regardless of how they are marketed!

Plant attributes	Comments
Does the plant contain a lot of waxes, oils, and resins?	A plant with more waxes, oils, and resins will likely be more flammable and release more energy when it burns. (Conifers are generally high in resins.)
What is the leaf moisture content?	Leaves with higher moisture content are less flammable than drier leaves. (See more on succulents below.)
Does the plant have an open-growth structure?	A densely structured plant can capture embers and may be more likely to ignite. It will also be more likely to be easily ignited by a surface fire. (See the Crape Myrtle example below.)
How fast does the plant grow?	A plant that grows quickly may exceed growth expectations and require greater maintenance.  Pruning, maintenance, and cleanup can have a greater impact on whether a plant ignites than does the type of plant it is.
Does the plant shed bark, leaves, or needles?	A plant that sheds bark or branches is likely to need more regular maintenance-related cleanup to reduce fuel accumulations on the ground. (Example: Eucalypts)  A plant that has a big leaf or needle drop will result in the need for more maintenance-related cleanup on the property, on the roof, and in rain gutters.
Is the plant native to the area?	Native plants, pollinator-friendly, or drought-tolerant plants can be good choices for those labeled qualities, but these features do not directly translate to fire resistance.

### Fire resistant plants



**Crape myrtle**  
*(Lagerstromia indica)*

These beautiful small trees (or bushes) tend to develop suckers that, if not removed, can form a dense cluster. The crowns can become dense, so they require ongoing pruning and thinning. Also, some gardeners like them positioned as hedges, which could cause a fire to travel quickly along the length of the hedge.



**Manzanita**  
*(Arctostaphylos spp)*

These native plants range from low, spreading plants to large bushes. They have a lot of appeal both because of their flowers and their striking bark. In a garden they are sometimes planted under larger trees, thereby creating a 'ladder' for a fire to reach the crown of a tree above it. If a manzanita burns, it burns hot, but in the wild they have an amazing ability to re-sprout from the root, making them resilient.



**Succulents**  
*(numerous genera)*

In zone 0, succulents may be a choice for those of us who are not excited about switching to hardscape around the house. There are many varieties of succulents that hug the ground and contain a lot of water in their fleshy leaves. It has been suggested, though the jury is still out on this, that such plants, when well maintained, may actually help keep swirling embers from reaching the

—continued on page 4

## Fire-wise Landscaping

—continued from page 3

base of your house. Sonoma County's Master Gardeners have a great page on succulents: [https://sonomamg.ucanr.edu/Recommended\\_Plants\\_for\\_Sonoma\\_County/Succulents](https://sonomamg.ucanr.edu/Recommended_Plants_for_Sonoma_County/Succulents)

Labeling any plant as fire-resistant is an oversimplification of a complex problem. There can also be confusion as to whether a plant is resistant (does not easily catch fire) or resilient (has the ability to survive or has seeds that will survive). So, relying on lists of fire-safe plants is not the best thing to do. Below are just a couple of examples of plants that you may find on such lists, with some corresponding comments.

## Coastal wildfire concerns

The counties of Humboldt and Del Norte are blessed with a long, beautiful coastline with a cool and moist climate, and most of our population lives near the ocean. It is the hotter, forested inland areas that have seen the bulk of the wildfires. However, the coastal communities should not be complacent, as indicated by this snippet ([Chapter 14 Wildfire Hum Co-LHMP \(ca.gov\)](#)):

*Despite the generally damp climate prevailing in these forests, studies have suggested a historical fire return interval of 50 to 100 years in the northern part of [Humboldt County] and 12 to 50 years in the south. Several of the more destructive historical fires occurred on the coast around the Trinidad area, including the 7,432-acre Luffenholz Fire of 1908, the 17,527-acre A-Line Fire of 1936, and a 15,000-acre unnamed fire near Patrick's Point in 1945.*

## Resources

Much of this article is based on a document from Humboldt/Del Norte's own Yana Valachovic, Forest Advisor for the University of California Cooperative Extension and Humboldt - Del Norte County Advisor and colleagues: [Reducing the Vulnerability of Buildings to Wildfire: Vegetation and Landscaping Guidance UC ANR publication 8695](#).

## CalFire

Defensible Space

- <https://www.fire.ca.gov/Odspace>
- <https://readyforwildfire.org/prepare-for-wildfire/defensible-space/>

Weed management includes hand pulling, mowing, decreasing the seed bank, and allowing them to grow in a controlled manner. Using herbicides is another tool in the toolbox and are effective when applied with knowledge and safety. Here are some resources for you about the identified weeds and the use of herbicides/pesticides. We encourage you to follow all directions and precautions when using chemicals so that you do not harm yourself or the environment.



Weeds in a pasture, L. Nedian, UCCE Master Gardener

## Resources

- Weeds—Identifying and Controlling [https://ucanr.edu/sites/hdnmastergardeners/Resources\\_for\\_Home\\_Gardeners/Weeds\\_-\\_Identifying\\_and\\_Controlling/](https://ucanr.edu/sites/hdnmastergardeners/Resources_for_Home_Gardeners/Weeds_-_Identifying_and_Controlling/)
- Weed Control in the Vegetable Garden <https://yardandgarden.extension.iastate.edu/how-to/weed-control-vegetable-garden#herbicides>
- How to Manage Pests in Gardens and Landscapes, Burning & Stinging Nettles <https://ipm.ucanr.edu/PMG/PESTNOTES/pn74146.html>
- Common Horsetail, U.S. Forest Service [https://www.fs.usda.gov/wildflowers/plant-of-the-week/equisetum\\_arvense.shtml#:~:text=Equisetum%20arvense%20orange%20map.,Common%20Horsetail%20\(Equisetum%20arvense\)](https://www.fs.usda.gov/wildflowers/plant-of-the-week/equisetum_arvense.shtml#:~:text=Equisetum%20arvense%20orange%20map.,Common%20Horsetail%20(Equisetum%20arvense))
- It's True What They Say About Horsetails, Patricia Matteson, December 20, 2022 <https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=55810>

## Advice to Grow By... Ask a Master Gardener

**A** free public service available to home gardeners in Humboldt and Del Norte Counties.

Have questions about plants, trees, shrubs, insect or animal pests, fruits and vegetables, weeds, invasive plants, succulents, houseplants, lawns, or something else?

Submit your question online [here](#).

## Ask a Master Gardener... Weed Control and Herbicide Use

**Q** I have lots of weeds in my orchard. I've tried hand pulling and a high concentration of vinegar without much success to get rid of the stinging nettle, horsetail, hemlock, and wild radishes. Can I use herbicides?

**A** So, what is a weed? It is a plant that is out of place, unwanted, or interferes with crop or livestock production. Weeds can also protect and restore exposed soils, provide habitat for beneficial organisms, such as pollinators, make nutritious food and fodder, and replenish and restore soil life.

—continued on page 5

## Ask a Master Gardener...

—continued from page 4



- Horsetails Weed Report from the book Weed Control in Natural Areas in the Western United States  
[https://wric.ucdavis.edu/information/natural%20areas/wr\\_E/Equisetum.pdf](https://wric.ucdavis.edu/information/natural%20areas/wr_E/Equisetum.pdf)
- How to Manage Pests in Gardens and Landscapes, Poison Hemlock  
<https://ipm.ucanr.edu/PMG/PESTNOTES/pn74162.html>
- UC IPM Pesticide Information, Active Ingredient: 2, 4-D  
<https://ipm.ucanr.edu/TOOLS/PNAI/pnaishow.php?id=3>
- Warning in the Use of Pesticides  
<https://ipm.ucanr.edu/PMG/PESTNOTES/warning.html>
- UC IPM Weed Gallery – Wild Radish  
[https://ipm.ucanr.edu/PMG/WEEDS/wild\\_radish.html](https://ipm.ucanr.edu/PMG/WEEDS/wild_radish.html)

## Summer 2024 Gardening Events



We will have a table at the **Henderson Center Farmers' Market** on Thursdays, 10 am to 1 pm, **July through October**. For additional information, visit <https://www.northcoastgrowersassociation.org/>

### Humboldt Botanical Garden Education Series

**Butterflies—July 6**, 9:30–Noon  
**Bats—August 3**, 9:30–Noon  
**Coastal Dunes—September 14**, 9:30–Noon  
**Soils—October 5**, 9:30–Noon

*Disclaimer: All dates are subject to change. Check with individual vendors for more information.*

# Seasonal IPM Summer Guide for the North Coast Region

## Integrated Pest Management



**H**ere's a list of things to keep an eye on this summer to avoid and manage pests of landscape trees, shrubs, and vines by incorporating these IPM strategies. Follow the links to learn more.

**Abiotic Disorders**—Address your plants' basic needs to prevent or manage damage, such as that caused by poorly drained soils, frost, hail, herbicides, wind, and too much or too little water.

**Ants**—Manage around landscape and building foundations, such as using insecticide baits and trunk barriers.

**Aphids**—Spray a strong stream of water on small plants or apply insecticidal oils and soaps. Look for and conserve [natural enemies](#) like predaceous bugs, lacewings, lady beetles, and syrphids.

**Camellia, citrus, gardenia, grape,** and other plants adapted to acidic soil—If leaves are yellowing (chlorotic) between green veins, plants may benefit from foliar or soil application of iron and zinc chelate and mulching.

**Cherry spotted wing drosophila**—Harvest early; apply spinosad when the fruit develops any pink color.

**Citrus**—Monitor for damage and pests such as leafminers and scales.

**Clean up mummies**, old fruit, and nuts in and under trees to avoid harboring pests.

**Coast redwood dieback**—Check for drought-stress-related maladies such as abiotic disorders, bark beetles, fungal diseases, and spider mites. Deep water trees and apply mulch.

**Codling moth** of apple and pear—Bag fruit. Promptly remove infested and dropped fruit. Apply insecticides only if precisely timed.

**Compost**—Turn and keep it moist. Remember to add a carbon source such as straw or wood shavings.

**Cover fruit trees and grapes** with netting to exclude birds and other vertebrate pests.

**Deter borers**—Deep water trees adapted to summer rainfall, e.g., fruit and nut trees. Protect trunks and roots from injury and avoid pruning, except for hazardous trees and certain pests and plants that warrant summer pruning. Paint trunk and scaffolds with white interior latex paint diluted with equal water.

**Eutypa dieback and gummosis**—Prune apricots and cherries during dry days instead of winter pruning to avoid these diseases.

**Fertilize caneberrries**, citrus, deciduous fruit trees, palms, and heavily-flowering shrubs with slow-release product if not done in March or April.

**Fire safe landscape**—LEAN: Thin out thick vegetation and eliminate fuel ladders that allow fire to climb up trees. CLEAN: Mow grasses and trim shrubs. Remove dry, resinous, or dead plants and flammable debris. Cut branches back 15 to 20 feet from buildings. Use non-combustible surfaces for walkways, patios, and driveways. GREEN: Landscape using low-growing, non-woody plants.

**Grape diseases**—Monitor for powdery mildew, Eutypa dieback, Phomopsis cane, and leaf spot. Prune, remove, or treat as appropriate.

**Implement disease and insect control** for apples, pears, stone fruits, nut trees, and deciduous landscape trees and shrubs such as roses.

—continued on page 6

# Seasonal IPM Summer Guide

—continued from page 5

**Irrigation**—Adjust watering schedules according to the weather and plants' changing need for water. Check systems for leaks and broken emitters and perform maintenance as needed. Consider upgrading the irrigation system to improve its water efficiency.

**Lightly prune roses** to promote fall flowering.

**Mosquitoes**—Eliminate standing water, e.g., in gutters, drain pipes, and flowerpots. Place *Bacillus thuringiensis* subspecies *israelensis* in birdbaths and ponds to selectively kill mosquito larvae.

**Mulch**—Apply organic mulch where thin or bare soil beneath trees and shrubs.

**Petal blight of azalea, rhododendron, and camellia**—Remove and discard old flowers. Apply fresh organic mulch beneath plants.

**Powdery mildew**—If severe, e.g., on crape myrtle, grape, and rose, avoid fertilization and overirrigation. Prune during the proper time of year to increase air circulation and sun exposure.

**Prune deciduous trees and shrubs** that need pruning, e.g., apple, crape myrtle, pear, rose, spirea, and stone fruits. Make cuts properly to encourage good form and structure. Remove dead, diseased, and borer-infested wood. Except certain pests and host plants warrant summer pruning, e.g., shothole borer, apricot, and cherry.

**Rose pests**—Manage or take preventive actions, such as for aphids and powdery mildew.

**Scale insects**—If damage has been unacceptable, monitor the crawler stage, and when abundant, apply horticultural oil or another insecticide.

**Spider mites**—Irrigate adequately, mist leaf undersides daily, reduce dustiness, and spray horticultural oil or neem.

**Stone fruit pests**—Monitor for pests such as aphids, borers, brown rot, caterpillars, powdery mildew, and scale insects.

**Weeds**—Manage weeds using nonchemical methods such as hoeing, handweeding, mowing, or mulch.

**Yellowjackets**—Place out and maintain lure traps or water traps.

## Olla Irrigation

—Lisa Nedlan, UCCE Master Gardener

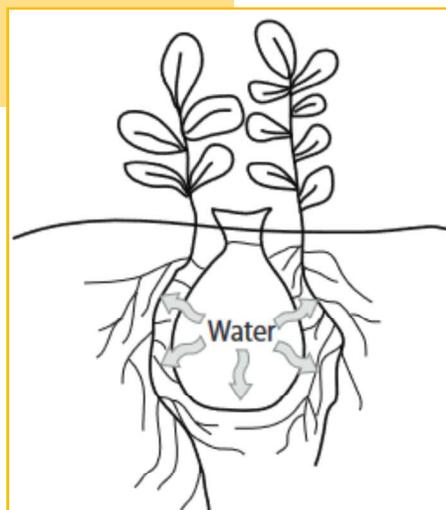
**O**llas (pronounced oh-yahs) are ceramic jars, often unglazed, used for cooking, storing water or dry foods, or irrigating plants. They have been around for over 4000 years and can be found around the world. Ollas for irrigation are clay vessels/pots (with lids) that are buried in the soil to water crops. Ollas can save gardeners time, energy, and water. Plants watered this way do not undergo water stress (as long as the gardener keeps the olla filled).

### Here is how it works

The clay pot is buried, with only the top opening above the soil surface. It's then filled with water. The olla walls are porous, meaning they have tiny holes. This allows water to flow out of the vessel into the soil. However, the pores are small, so the water does not just rush out of the pot into the soil.

The effectiveness of olla irrigation lies

in the interaction between soil moisture and the plant's roots. This dynamic creates a unique suction force, where the plant's roots 'pull' the water out of the olla if the soil is dry. Conversely, if the soil is wet from rainfall or surface watering, the water remains in the olla until the surrounding soil dries,



—[www.selaogardenart.co.nz](http://www.selaogardenart.co.nz)

ensuring

a balanced and efficient watering system.

Implementing olla irrigation is not just about watering your plants; it's about fostering deep watering and dense root growth. This, in turn, enhances nutrient and water uptake, leading to healthier plants. Additionally, the controlled moisture levels prevent the extremes of wet and dry that can cause bitterness in greens and cracks in tomatoes and melons. As a bonus, the relatively dry soil surface acts as a natural deterrent to weeds and some unwanted

—continued on page 7

## Olla Irrigation

—continued from page 6

insects, further enhancing the health of your garden.

Crops with fibrous root systems, such as tomatoes, squash, melons, and chiles, respond well to olla use. When using ollas with plants with shallow root systems, consider the shape and size of the olla and where the water will be in the soil. You can also use ollas with young perennial landscape plants (trees, vines, and shrubs.) Plants with woody roots might break an olla. If you notice that you are having to fill the pot more frequently, consider that a crack has formed in the olla.

Ollas are inefficient for densely planted annual crops due to the number of ollas necessary for even coverage.

### Tips for using ollas

- Bury the olla, leaving 1–2 inches above the soil surface to keep dirt and mulch from getting inside. Gently pack the soil around the olla to prevent air pockets. Air pockets will prevent water from moving into the soil and keep roots from growing.
- To maximize impact, place ollas every 2–3 feet in the garden. Larger ollas, with a 2 or more-gallon capacity, can be placed up to 3–4 feet apart.
- If your soil is very deep, place a saucer or drainage tray under the olla at the bottom of the hole. This will promote



—Photo L. Nedlan, UCCE Master Gardener

water seepage outwards instead of downwards.

- Check the water level frequently and refill as necessary. Soil type, plant density, and weather can influence how often you need to refill. Refill times can vary from every seven days or more or as frequently as every other day.
- Cover the olla opening with a lid, rock, or plate to minimize evaporation and prevent mosquito breeding.
- Ollas are best suited for coarse-textured and/or sandy soil. Soil with a high clay content does not dissipate water well.
- When planting seeds, plant a few inches away from the olla opening. Water the entire planting area. If your olla isn't keeping the top 2 inches of soil moist, you may need to surface water until the seeds germinate.
- Know where your ollas are buried. Mark them with rocks, a pin flag, or something else to prevent someone from stepping on the olla.
- If you live in an area with hard freezes, dig up your olla each winter to prevent cracking underground.

Several types of ollas are available for purchase at garden shops, online, or from your local potter. There are several methods for making your own from clay or terracotta pots. Consider your space, the cost, how many ollas you will need, and how often you are willing to refill them.

If you would like to make an olla from terracotta flower pots, [click here](#).

I have successfully used ollas in my garden for the past two growing seasons. Try it.



### Resources

How to use olla irrigation

<https://wateruseitwisely.com/blog/olla-irrigation/>

Olla Irrigation

<https://images.nativeseeds.org/pdfs/Ollairrigationhandout.pdf>

University of Arizona, Irrigating with Ollas

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1911-2021.pdf>



—Photo L. Nedlan, UCCE Master Gardener