Whether you plant wildflowers in huge swaths along roadsides or in tiny pocket gardens in the backyard, the vibrant colors and rich mixtures these hardy plants bring are sure to please any flower-lover’s eye and attract beneficial pollinating insects.

But don’t let the word “wild” make you think wildflowers require no maintenance. As with any kind of gardening, planting and caring for wildflowers requires work and planning, but following these basic rules from University of Georgia Extension will assure your success.

Select seeds, choose and prepare site

Choose a site. It may be tempting to plant wildflowers where nothing else grows, but while they’re hardy, they’re not magical. Most need full sun and moderately fertile soils that drain well, but not too quickly.

Choose seeds. Your wildflowers will only be as good as the seeds you sow. Invest the time and energy to plant them right. Don’t ruin the project before it begins by using questionable seeds. Most mixtures include annuals and perennials. In general, mixtures for warm climates may include more annuals, because they tend to reseed year after year.

Prepare the site. I highly recommend removing existing vegetation before planting wildflower seeds. Till the soil, if you can, to create a loose seedbed. If you can’t till, at least scratch the soil surface.

Weed, plant and water

Eliminate weed seeds in the upper layer of the soil. Allow weeds to germinate and begin to grow, then remove the weeds by chemical or mechanical means. Don’t till again, or you may turn up new weed seeds and have to repeat the process.

Plant the seeds. Good seed to soil contact is essential for a high germination rate. For even distribution, mix seeds with sand, vermiculite or cornmeal. Scatter seeds and rake them in lightly. Be careful not to cover them too deeply. Fall plantings offer the advantage of early germination and growth. Spring or early summer planting is fine in most areas, but you may have to provide water for the first several weeks.

Water the site. Many wildflowers are drought tolerant, but all plants, wildflowers included, need enough moisture to germinate and thrive. Keep the site evenly moist during the first four to six weeks. Then gradually reduce watering.

(Continued on page 7.)
The majority of pest insects can be controlled with one of three environmentally friendly products – horticultural oils, insecticidal soaps and Bt products.

Horticultural oil is especially formulated for use on plants. It is a petroleum-based oil with an emulsifier added that allows it to mix with water. It kills scales, mites, aphids, whiteflies and other soft-bodied pests by suffocation, plugging up the insects’ breathing pores.

Horticultural oils are classified as dormant oils, summer oils or superior oils. Dormant oils are the heaviest of the horticultural oils. Apply these oils during winter dormancy and before plants begin spring growth. Do not use dormant oils during the growing season unless the label specifically states that such use is safe.

Summer oils are lighter than dormant oils and are formulated for spring and summer use. Superior oils are the most refined of all petroleum oils and are excellent products for horticultural pest control in any season. Superior oil products allow greater flexibility in their use and have been tested at temperatures in the mid 90s with no damage to shrubs.

Did you know? You can control many common pests such as aphids by using insecticidal soap, an environmentally friendly method. Image credit: Jim Ooci, bugwood.org

Only a few manufactured soaps are effective insecticides. Insecticidal soaps are made from potassium salt of oleic acid, which is present in high quantities in olive and other vegetable oils. Insecticidal soap causes insects to dehydrate by physically breaking down the insect’s outer protective layer (cuticle).

Thorough spray coverage is essential when using oils and soaps. These products are not poisons. For best results, coat the pest, all plant surfaces, tops and bottom sides of leaves and stems with spray. Horticultural oils are sold under various descriptive names such as “dormant oil,” “oil emulsion,” “pesticide oil,” “summer oil” and “superfine oil.” There are several soaps available for purchase such as Safer Insecticidal Soap and M-Pede.

Another environmentally friendly product for controlling caterpillars is (Continued on page 5.)

Incorporate Bacillus thuringiensis (Bt) into your tent caterpillar control methods if necessary. Image credit: Brytten Steed, bugwood.org
In addition to being the most valuable fruit crop in Georgia, blueberries are one of the most popular fruit plants among backyard gardeners. They are fairly easy to grow, given the right soil conditions, and have very few insect or plant disease problems compared to other fruits. When problems do arise, mineral deficiencies or pH problems are typically the culprits.

Blueberries are very well adapted to Georgia because they thrive in acidic soils with a pH between 4.5 and 5.2. To ensure that you have the proper soil pH and low calcium levels in your soil, complete a soil test prior to planting. In some backyard gardens, the soil pH and calcium levels can be very high, making the soil unsuitable for growing blueberries. High soil pH and calcium levels are often caused by excessive organic amendments or limestone (calcium carbonate) applications, which are necessary for growing most vegetables, lawns and landscape shrubs. Blueberries and a few other acid-loving plants are the exception. Limestone should never be applied around acid-loving plants. Acid-loving plants, such as blueberries, azaleas, rhododendrons, gardenias and camellias, should be segregated from other plants in your landscape or garden to avoid soil pH conflicts.

When a client calls about yellow leaves on their blueberry plants, it’s almost always related to a nutrient deficiency. More specifically, if both young leaves and mature leaves are uniformly yellow, it’s most often a nitrogen deficiency.

An iron deficiency can also cause yellowing of the youngest leaves, or newest growth, on blueberries. The leaf veins will remain a dark green color and will stand out in contrast to the yellow background of iron-deficient leaves. Iron deficiencies often occur when the pH is above 5.3 or when calcium or phosphorus levels are too high in the soil. If soil pH is greater than 5.3, sulfur will be recommended to decrease soil pH. Plants irrigated with water from deep wells in lime rock may exhibit a temporary iron deficiency during dry periods, when they are surviving solely on alkaline water.

A magnesium deficiency is occasionally seen in Georgia, and it usually occurs on older leaves. On young rabbiteye blueberry plants, the most common symptom of a magnesium deficiency is mature leaves that are pink on the edges and yellowish between the veins. When magnesium is low, based on a soil test, you can add Epsom salts (magnesium sulfate) at the rate of 3 ounces per plant to compensate for the deficiency. If calcium levels of the soil are too high, this will also amplify a magnesium deficiency.

One situation we often encounter is blueberries and other acid-loving plants being placed too close to the... (Continued on page 7.)
The summer heat makes it difficult to work outside for long. But some chores in your landscape need to be addressed to keep your plants attractive and healthy.

Probably the most critical detail right now is the effect of the summer’s heat. Many plants can suffer from extended hot, dry conditions.

Allowing plants to get to the wilting point before watering may cause irreversible damage to some varieties, especially shallow-rooted annuals and perennials.

If water restrictions allow, give these plants a drink at night; or better, early in the morning to avoid the hottest part of the day and the greatest amount of evaporation.

Don't forget to water your most prized trees as well. It's easy to replace a three dollar annual flower, but nearly impossible to restore a 50-year-old oak.

While walking around your landscape, continue to deadhead flowers of annuals and perennials. This will keep the plants from going to seed in some cases and help them initiate more blooms for the rest of the summer. Deadheading can also lessen the chances of disease and insect attack by removing potential infection sites - dead or decomposing flowerheads.

Check your roses carefully for signs of spidermite damage. Spidermites love the hot, dry weather and will take every opportunity to invade your roses. Keep spraying throughout the growing season with a combination fungicide, insecticide and miticide.

When you need to apply chemicals, do it either very early or very late in the day to avoid burn on the foliage from hot temperatures. Apply insecticides late in the day to avoid killing honeybees as they are usually more active in the early morning hours.

If weeds have been a problem in the flower beds, hand removal may be the best bet. It's hard to kill mature weeds with chemicals. Spot treatments with a nonselective herbicide such as Roundup or glyphosate may be possible if you're careful not to contact desirable plants.

Adding a new layer of mulch can go a long way, too, toward controlling unwanted weeds, as well as helping to keep the soil evenly moist.

Take a close look at vigorously growing shrubs such as privet, hollies and ligustrum. They may need a trim to keep them in shape and away from your windows. Light pruning of the fast-growing shoots won't harm the plant. And this type of pruning will give plants more compact form. Save heavy pruning, though, for late winter.

Remember to lightly fertilize annual flowers and roses each month. Water the fertilizer in thoroughly after applying to get the nutrients into the plants’ root zone. If you use a liquid fertilizer, read the directions carefully. And don't apply liquid fertilizers on flowers or foliage during the heat of the day as burn may occur.

Begin soon to plan your fall landscape changes. Many catalogs require you to order now for a fall shipment. Look at the success of your existing landscape and ask yourself if you're happy with the arrangement, spacing and color.

Draw out what changes you'll make and begin to check on the availability of plants for this fall. Fall is the ideal time to plant most landscape plants.

When you've finished scouting and maintaining your landscape, kick off your shoes in the comfort of your air-conditioning. You'll feel better knowing that your landscape is healthy and ready to take on another hot summer day in Georgia.

(Robert R. Westerfield is a consumer horticulturist with UGA Extension.)
I have an area next to my home that is on a shady slope, is mostly clay and is eroding significantly with all the rain we have been experiencing. What might I plant to help anchor the clay and prevent erosion?

- Jane S., Watkinsville, GA

There are numerous ground covers you could utilize in that area to reduce erosion.

Many in our area have invasive tendencies, though, so make sure you know what you are purchasing. An attractive evergreen ground cover is Pachysandra, which forms a carpet of glossy green leaves no more than 8 inches tall. Ajuga, or bugleweed, is another low-growing ground cover that's well suited to dry, shady conditions. There are numerous cultivars of bugleweed available with different sizes and leaf colors.

A perennial plant that would do well is hellebore or Lenten rose. This is another evergreen plant, but it grows 18 to 24 inches tall in clumps. Hellebore blooms in late winter, and once established will form a colony from all the seedlings produced.

If you are in search of a native plant for this slope, Christmas fern is an attractive option with evergreen fronds, a moderate growth rate and clumping growth habit. A dainty native choice would be dwarf crested iris, which is no more than eight inches tall with purple iris flowers among the foliage each spring.

Depending on the size of the slope, it might be hard to cover the entire area with one type of plant. Feel free to create groupings of plants that will do well in this area. This will spread out the bloom time throughout the year and create a more attractive landscape.

Make sure to test the soil before planting, and mulch around the plants to increase water penetration, to slow down moving water, and to keep the soil evenly moist.

(Amanda Tedrow is the Agriculture & Natural Resources agent for the University of Georgia Extension office in Athens-Clarke County.)

Hellebore or Lenten rose is a flowering, evergreen plant that can help prevent erosion while adding to your landscape. Image credit: flickr user sally anderson

Soap, oil and Bt products control most garden insects, continued...

Bt (Bacillus thuringiensis). Bt is an insecticide stomach poison for use only against caterpillars. Bt should be used when the caterpillars are young, and the caterpillar must ingest the Bt for it to be effective. After ingesting a lethal dose of Bt, the caterpillar stops feeding and will die within several hours to days. Bt can be found under several brand names such as Dipel, Thuricide and Sok-BT.

Though horticultural oils, soaps and Bt products are less toxic than many insecticides, it is important to use them with caution. Read and follow the label carefully.

(Keith Mickler is the Agriculture & Natural Resources agent for the University of Georgia Extension office in Floyd County.)

For more information on dealing with garden pests, refer to the UGA Extension publication “Control of Common Pests of Landscape Plants (B 1074).”
Happy Independence Day! July is a month to celebrate this great nation. We also celebrate National Workaholics Day on July 5. And what is more fitting that celebrating freedom and hard work with some of the hardest working little critters I know? During this month’s article, we will discuss the hard work that these little critters do every day! Red wigglers are the most popular worms used in most vermicomposting bins, and their abilities and work ethic is unmatched. We will also talk about some fun worm facts.

A treat for your hard workers!
As we celebrate this month, one way to spoil your little worm workers is to offer them watermelon or pumpkin—these are among their favorite treats!

Work schedule
Have you ever checked your worm bin during the day to find that a good number of your worms have congregated towards the bottom of the bin? You may or may not know, but worms are very sensitive to light. Due to the natural light coming into your home, they can be exposed to this light during the day. For this reason, they may try to avoid the light by moving to the bottom of the bin. During the evening hours, though, you may see the worms actively moving around the bin—perhaps you will see them on the sides of the bin. At this time, incoming light is not affecting their light sensitivities.

Just how hard are they working?
The red wigglers are known for being great bin composters. They are shallow burrowers, are fairly easy to maintain, tend to not be very picky eaters and have ferocious appetites. All of these characteristics make them ideal to work in your worm bin. I am often asked just how much food one worm can process, which also begs the question: just how much wonderful compost will these little critters create? As I always say, “It depends.” In general, most wormers believe that one worm can process the equivalent of half its own body weight in food scraps each day. Some studies suggest that teenage red wigglers often eat more than adult red wigglers. Studies also show that worms can eat up to three times their weight each week. This level of processing typically only happens if the bin conditions are ideal—for example, the temperature is to their liking, there is enough moisture in the bin, etc. In larger systems where conditions are highly optimal, a worm can process multiple times its own weight in food scraps! Isn’t that amazing?

Why we love the red wigglers
Red wigglers are a perfect match for the worm bin composting system for a variety of reasons. We’ve established that they have voracious appetites. Another reason they are a vermicomposting favorite is that they are quite easy to please when it comes to feeding materials. Simply put, they are not picky eaters! For example, we use red wigglers primarily in residential composting systems.

(Continued on page 8.)
Maintain and weed
Maintain the area. Mow wildflowers high three times - usually in late spring, midsummer and late fall. Rake up the cut material, or leave it in place to serve as a protective mulch. After a cleanup mowing in late fall, overseed annuals and bare spots as needed with half the normal seeding rate.

With timely weeding, watering and mowing, wildflowers will bring beauty and fragrance as the seasons unfold from full spring flowers to autumn’s last lingering aster.

For more on growing wildflowers in Georgia, see the UGA Extension publication “Native Plants for Georgia Part III: Wildflowers (B 987-3)” at www.extension.uga.edu/publications.

Blueberry leaves can tell the tale of soil deficiencies and pH problems, continued...

Georgia blueberry season is mid-April (south Georgia) through the end of July (north Georgia). Under good management, blueberry bushes will produce some fruit the second or third year after transplanting. By the sixth year, they will yield as much as 2 gallons per plant. The yield will continue to increase for several years as the plants grow larger.

Foundation of a home, sidewalk or driveway. Concrete and other masonry work can leach limestone and calcium into the surrounding soil and raise the soil pH too high for these types of plants. In these situations, the best option is to move blueberries away from the masonry structure.

When it comes to selecting blueberry varieties for home gardens, rabbiteye blueberries are the best choice. Rabbiteye blueberries are native to Georgia and grow well in all different parts of the state. It’s important to plant more than one bush, so that cross-pollination can occur. Be sure to select varieties recommended for Georgia when shopping for plants. A list of recommended rabbiteye varieties is given in UGA Extension circular “Home Garden Blueberries (C 946).”

(Paul Pugliese is the Agriculture & Natural Resources agent for the University of Georgia Extension office in Bartow County.)

(Frank Watson is the Agriculture & Natural Resources agent for the University of Georgia Extension office in Wilkes County.)
to eat kitchen food scraps. By doing this kind of vermicomposting, we can divert food scraps from the landfill. However, red wiggles are just as happy eating decaying leaves, grasses, wood and animal manure. They are very versatile creatures, and this versatility makes them even more popular as a composting choice.

**Takeaway**

One lesson I would like you to take away from this article is to know your worm bin. Make sure that the moisture levels are adequate (around 40 to 60 percent) and that your worms are receiving enough food. Also, make sure that the temperature is at a level for the worms to feel comfortable. The ideal temperature is roughly 55 to 77 degrees. Luckily, there are ways to track these conditions in your bin! For example, you can use a thermometer to check that the temperature stays within the correct range. I encourage all of my fellow binners to record this information at least once a month. This allows you to regulate the bin and ensure that you are maintaining ideal conditions.

**That time again...**

Well readers, in the spirit of Independence Day, we appreciate the freedoms we share in this great country, including the freedom to make a difference. We also send out much appreciation to every single person and group helping our environment! And of course, let us not forget our worms that make all of this possible. After all, they are our hardworking Wonder Worms! And let’s take a moment to remember that you, your worm helpers and your bin are making a difference. Even on a small scale, your contributions are having an impact and will positively affect your community as a whole.

(Amanda’s Slice - 2016 Athens Area Master Gardener Program Enrolling!)

If you would like to take your gardening skills to the next level and give back to your community, I strongly encourage you to apply to the [2016 Athens Area Master Gardener Extension Volunteer program](http://www.uga.edu/extension/warden/mg/). Established in 1990, the Athens area program provides home gardeners with an intensive educational experience in horticulture principles, practices and pest management.

After completing the three-month course, participants transfer this new knowledge to the community through approved volunteer opportunities. Currently, more than 200 Master Gardeners serve the Athens area. In 2014, this dedicated group of volunteers recorded over 13,000 hours of service and interacted with 20,000 community members.

Master Gardeners answer gardening questions at the ACC Extension office, staff informational booths at farmers markets and local events, conduct plant clinics, help with Plant a Row for the Hungry gardens, assist curators at the State Botanical Garden of Georgia, teach Junior Master Gardener programs at local schools and more.

The 2016 program will be held on Tuesday and Thursday mornings from 8:45-11:30 a.m. from January-March, 2016. Classes will take place at the [State Botanical Garden of Georgia](http://www.sbg.uga.edu/) in Athens. The program is not limited to Athens-Clarke county residents, and beginner and experienced gardeners are welcome to apply.

If you have any questions regarding the program or [application](#), please contact me at atedrow@uga.edu or 706-613-3640. I hope you will join us!

- Amanda
Fall Vegetable Gardening

Beets, broccoli, carrots, cauliflower, Brussel sprouts, garlic, kale, onion, spinach, Swiss chard, turnips and more...fall is the ideal season for growing many vegetables!

Attend this free workshop to learn fall gardening basics. The workshop will include tips for soil preparation, what crops to plant, planting tips and maintenance.

**WHEN:**
Wednesday, August 19, 2015
6-7:30 p.m.

**WHERE:**
Athens-Clarke County Library,
Multipurpose Room A
2025 Baxter Street • Athens, GA

**TO REGISTER:**
Register by August 18 by contacting Athens-Clarke County Extension at (706) 613-3640 or atedrow@uga.edu.

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**Gardening Workshop Schedule**
All classes will be at the ACC Library on Wednesdays from 6-7:30 p.m.

**AUG. 19:** Fall Vegetable Gardening
**SEPT. 16:** Attracting Pollinators, Honeybees
**OCT. 21:** Woods in Your Backyard: Creating and Enhancing Natural Areas around Your Home
**NOV. 18:** Understanding Garden Soil

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The University of Georgia is committed to principles of equal opportunity and affirmative action.
The Seniors Garden Club hosted by the [Athens Community Council on Aging](https://uga.edu) meets on the first and third Thursday of the month from 10-11 a.m. Meetings are FREE. Contact 706-549-4850 for more information.

The [Ladies Homestead Gathering of Athens](https://uga.edu) meets the third Tuesday of each month from 6:30-9 p.m. at the Athens-Clarke County Extension office. Meeting topics range from gardening and composting to making bread and preparing herbal medicines. No experience necessary. For more information, contact lhgathensclarke@gmail.com.

On Thursdays, [UGarden](https://uga.edu) holds its weekly produce stand from 4:30-6 p.m. The student-run stand is located at 2500 S. Milledge Avenue by the big tan barn. Offerings include vegetables, shiitake mushrooms (in season), herbs and mixed herb teas. For more information, visit [www.ugarden.uga.edu](https://uga.edu).

The [Athens Farmers Market](https://uga.edu) takes place each Saturday from 8 a.m.-noon at Bishop Park. Saturday markets include live music, chef demos and kids’ activities. A downtown market is held each Wednesday from 4-7 p.m. at Creature Comforts Brewing Co.

The [West Broad Farmers Market](https://uga.edu) is held each Saturday from 10 a.m.-2 p.m. at 1573 West Broad Street in Athens. The market features fresh produce and other foods, crafts, music and educational activities for youth and families. A produce stand is held each Tuesday from 4-7 p.m. at the same location.

On Saturday, August 1, Beech Hollow Wildflower Farm is holding a guided walk focused on plants that love erosion banks. The walk will begin at noon. Beech Hollow Wildflower Farm is located at 1575 Elberton Road in Lexington. For more information, please visit [www.beechhollowfarms.com](https://uga.edu).

On Tuesday, August 4, the [State Botanical Garden of Georgia](https://uga.edu) is holding the “Dog Days of Bloomers” workshop from 6-7:30 p.m. This workshop will discuss bulbs, perennials and blooming shrubs that will extend the blooming season. The cost is $12. To register, please visit the SBG [event calendar](https://uga.edu) or call 706-542-1244.

On Thursday, August 13, Athens-Clarke County Extension, Stormwater Division and the Water Conservation Office are holding a FREE [WaterSmart Landscaping workshop](https://uga.edu). The workshop will take place from 6-8 p.m. at the Bob Snipes Water Resources Center in Athens. Participants will learn how to design and maintain a sustainable landscape. For more info and to register, visit the [ACC calendar](https://uga.edu) or call 706-613-3729.

On Wednesday, August 19, Athens-Clarke County Extension will present the free gardening workshop “Fall Vegetable Gardening.” Held from 6-7:30 p.m. at the Athens-Clarke County Library, the workshop will discuss all you need to know to start your fall vegetable garden. To register, please call 706-613-3640 or email atedrow@uga.edu.

On Saturday, August 22, Keep Athens-Clarke County Beautiful is holding the “Keepin’ It Clean” Dirty Dance Benefit at Little Kings Shuffle Club. This family-friendly event includes live dance performances and a silent auction. Proceeds benefit KACCB’s community beautification programs. For more information, please visit [www.keepathensbeautiful.org](https://uga.edu).

I say, if your knees aren't green by the end of the day, you ought to seriously re-examine your life.
- Bill Watterson, Calvin & Hobbes
Non-Drought Outdoor Water Use Schedule*
Effective August 8, 2013

allowed daily
Between 4:00 pm and 10:00 am
- Automated irrigation systems
- Hand watering (without a shut-off nozzle)
- Lawn sprinklers

allowed anytime
By anyone
- Commercial pressure washing
- Drip irrigation or soaker hose
- Watering of food gardens
- Hand watering (with a shut-off nozzle)
- Hydrosedding
- Installation and maintenance of an irrigation system
- Irrigation of newly installed turf (for the first 30 days)
- Irrigation of public recreational turf areas
- Irrigation of plants for sale
- Irrigation of sports fields
- Water from a private well
- Water from an alternate source
  - grey water, rain water, condensate

Please note: The odd/even schedule still applies to non-landscape outdoor water use.

*This Non-Drought Outdoor Water Use Schedule is consistent with the Outdoor Water Use Rules set forth in the Georgia Water Stewardship Act that went into effect statewide on June 2, 2010.
**Outdoor Water Restrictions:**

**Barrow, Oconee & Jackson Counties**

Outdoor water use for Barrow, Oconee, and Jackson Counties is now limited to three days per week with even number addresses allowed to water on Saturday, Monday, and Wednesday and odd number addresses allowed to water on Sunday, Tuesday, and Thursday. The ban on watering between 10:00 AM and 4:00 PM remains in effect for all scheduled watering days. No outdoor watering is allowed on Fridays other than exemptions below.

**THE FOLLOWING USES ARE EXEMPT FROM ALL HOURLY/DAY OF THE WEEK RESTRICTIONS:**

- Drip Irrigation
- Soaker Hoses
- Hand Watering
- Food Gardens
- New installations of plants and turf (with a permit)
- Grey Water, Rainwater and AC Condensation Reuse
- Golf Course - Tee and Green Irrigation
- Plants for sale, resale, or installation

**Please be aware that water restrictions are subject to change.**

For more information and additional exemptions please contact your county’s water conservation department.

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**Helpful information online:**

- Find My Local Extension Office
- Pest Management Handbook
- SE Ornamental Horticulture Production & IPM Blog
- Bugwood – Pest Images
- Georgia Turf
- Pesticide Applicator Info
- Georgia Certified Landscape Professional
- Landscape Alerts Online
- Upcoming Trainings
- Free Online Webinars
- Georgia Certified Plant Professional
- Extension Publications

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**Mission Statement**

The UGA Athens-Clarke County Extension’s mission is to respond to the people’s needs and interest in Agriculture, the Environment, Families, and 4-H/Youth in Athens-Clarke County with unbiased, research-based education and information.

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**Visit us online:**

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