# Horticulture Newsletter


Martin-Gatton College of Agriculture, Food and Environment
University of Kentucky

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*Inside this issue:*



## Master Gardener Spotlight

### *Norman Wallace*

*Class of 2007*

# Help Your Garden Weather a Heatwave

**Source: Rick Durham, Extension Professor, Department of Horticulture**

If you think you're hot, ask your plants (not literally). They can suffer under high summer heat, too.

Most vegetables and native plants can withstand a periodic heatwave, but once the soil dries out in the top few inches, all plants can feel the stress. Some vegetables like beans and tomatoes may delay producing fruit during hot weather but this is usually temporary. A layer of mulch around your plantings can help hold moisture for those important surface roots and moderate the soil's temperature. A light-colored mulch like straw, pine needles or grass clippings can help to reflect heat back and away from the plant's roots.

But don't worry. There are ways to protect your plants!

Photo from pixabay.com

Water your plants in the early morning before the heat of day to prevent water loss to evaporation. If you use sprinklers, most of that water can be lost through wind drift and evaporation, so try to water on a calm morning. Hand watering gives you the best control and directs the water exactly where you need it. If you can, it is best to soak the soil directly beneath the plant and avoid getting the leaves wet. Soaker hoses are good for directing the water where it's needed most.

Watering in the morning also discourages slugs and fungal diseases. An evening dousing can leave the soil and foliage wet for longer periods of time and encourage snails, slugs and the spread of disease.

You may have to water container gardens two or even three times a day, depending on how large the container is and how much foliage is present. If they are small enough to be moved, shifting containers to a place where they can get partialshade will help manage the plants' stress, but some plants may not bloom as well when exposed to prolonged shady conditions.

During normal weather, young trees need at least 10 gallons of water a week for the first three years directed toward their developing root systems. If you find yourself in a hot dry spell, provide your young trees and shrubs with more water. They are at their most susceptible during those early years. A tree bag contains a reservoir of water that is released slowly to the plant and can help keep the tree well-watered during the hottest spells. You'll only have to fill the bag occasionally rather than watering every few days. They can be purchased at most garden shops.

Shade cloth, which comes in varying thicknesses, can help protect plants that are withering under the sun's rays. Support it above or to one side of the plants, which will shelter them like a porch protects us from the strongest sunlight. Tree branches with leaves can also be placed over plants to provide shade.

Now is not the time to cut your lawns short. Mow them to at least a three-inch height. That way, the grass blades will provide shade for their own roots and help hold in soil moisture. Avoid fertilizing lawns and gardens during heatwaves, because roots' capacity for taking up nutrients are reduced during hot weather. You'll just be wasting your money. Most Kentucky lawns are comprised of bluegrass and tall fescue. Once established, both of these species and withstand quite a bit of drought.

Many cool-season crops are planted in August, but the late summer heat can be hard on young transplants. Again, shade cloth can come in handy. Or plant them under more mature plants, so they can benefit from the shade the larger plant throws.

For more information about how to weatherproof your lawn and garden, contact the McCracken County office of the University of Kentucky Cooperative Extension Service.


# Fall Hummingbird Migration

**By Ms. Mary Michaela Parker, MSU Extension Service**

Hummingbirds are fascinating little creatures and are adored by many people. If you're a hummingbird lover, you're probably giddy to have them flock to your yard again this season.

They spend the winter months in Central America and Mexico. When spring hits, they migrate thousands of miles into North America to their breeding grounds. Most hummingbirds spend the summer in the northern most part of the United States. As the temperatures start to drop in the fall, the birds start their trek back down south to find warmer weather.

Ruby-throated hummingbirds are the most common species found in Mississippi. There are several other species, but the ruby-throated variety are primarily found in the Eastern half of the U.S. It's fun to watch them chase each other around in the backyard. Ruby-throated hummingbirds have a heart rate of over 1,000 beats per minute and beat their wings 50 times a second. The speed that they beat their wings creates a humming noise, giving them their name.

Hummingbirds will likely be in the area until November before heading back to Central America and Mexico. If you want to have a few make a pit stop by your house, entice them with some sugar water. For a simple recipe, combine four parts water and one-part sugar, then boil the mixture for two minutes. Let it cool before pouring it into hummingbird feeders. If you provide food, they'll visit!

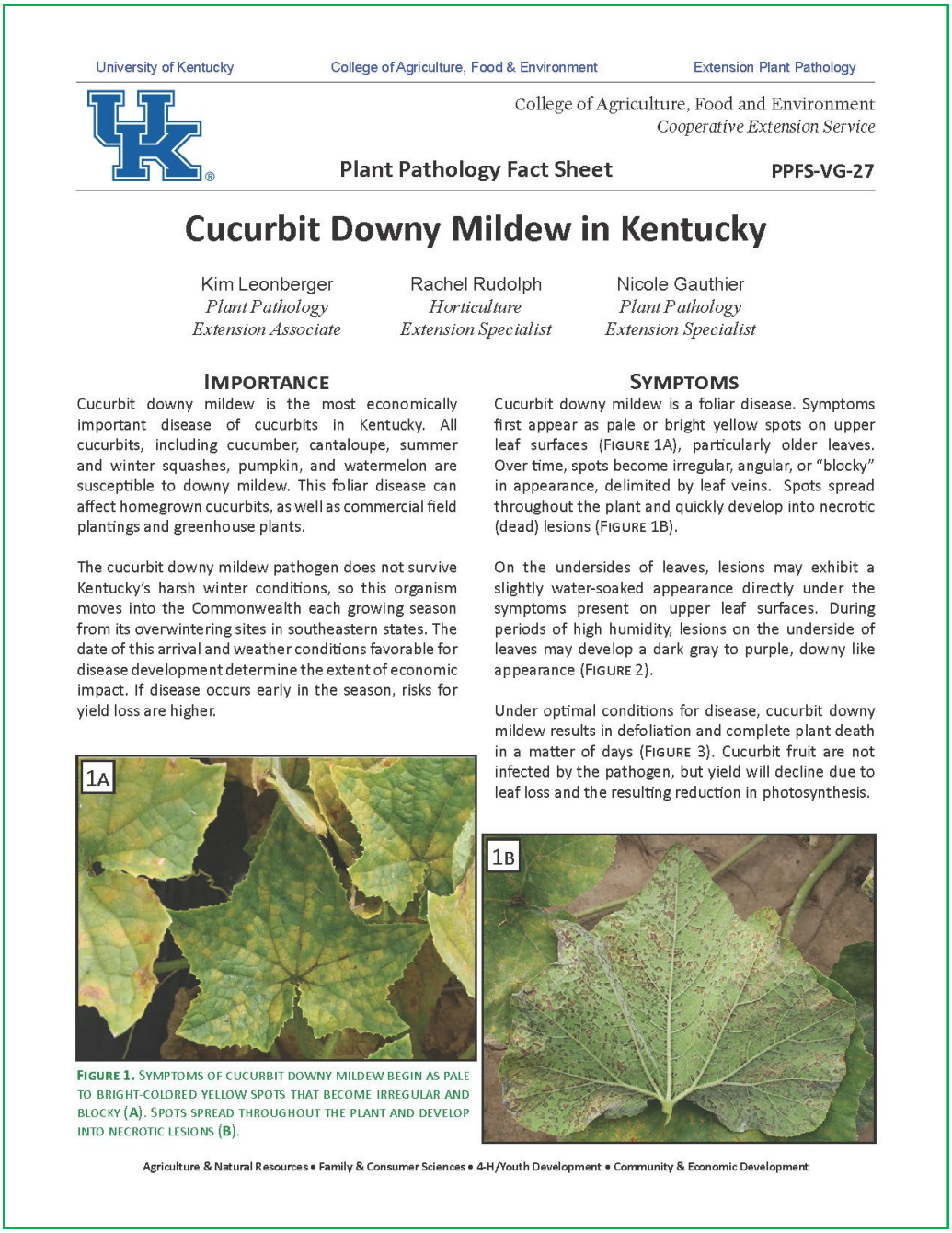
Learn more about how to attract hummingbirds to your yard in this blog post! It lists which plants to incorporate in your landscape to help hummingbirds feel at home when traveling through as they migrate further south. https://extension.msstate.edu/blog/how-attract-hummingbirds-your-yard

Posted on: September 16, 2022

# Cucurbit Downy Mildew in Kentucky (PPFS-VG-27)

Cucurbit downy mildew is the most economically important disease of cucurbits in Kentucky. All cucurbits, including cucumber, cantaloupe, summer and winter squashes, pumpkin, and watermelon are susceptible to downy mildew. This foliar disease can affect cucurbits in residential plantings, as well as commercial field plantings and greenhouse/high tunnel plants.

This fact sheet provides information on the importance of cucurbit downy mildew, cause, disease development, and recommendations for managing this potentially devastating disease.



University of Kentucky | College of Agriculture, Food & Environment | Extension Plant Pathology

College of Agriculture, Food and Environment
*Cooperative Extension Service*

**Plant Pathology Fact Sheet** **PPFS-VG-27**

## Cucurbit Downy Mildew in Kentucky


Kim Leonberger, *Plant Pathology Extension Associate*
Rachel Rudolph, *Horticulture Extension Specialist*
Nicole Gauthier, *Plant Pathology Extension Specialist*


### Importance

Cucurbit downy mildew is the most economically important disease of cucurbits in Kentucky. All cucurbits, including cucumber, cantaloupe, summer and winter squashes, pumpkin, and watermelon are susceptible to downy mildew. This foliar disease can affect homegrown cucurbits, as well as commercial field plantings and greenhouse plants.

The cucurbit downy mildew pathogen does not survive Kentucky's harsh winter conditions, so this organism moves into the Commonwealth each growing season from its overwintering sites in southeastern states. The date of this arrival and weather conditions favorable for disease development determine the extent of economic impact. If disease occurs early in the season, risks for yield loss are higher.

### Symptoms

Cucurbit downy mildew is a foliar disease. Symptoms first appear as pale or bright yellow spots on upper leaf surfaces (Figure 1A), particularly older leaves. Over time, spots become irregular, angular, or "blocky" in appearance, delimited by leaf veins. Spots spread throughout the plant and quickly develop into necrotic (dead) lesions (Figure 1B).

On the undersides of leaves, lesions may exhibit a slightly water-soaked appearance directly under the symptoms present on upper leaf surfaces. During periods of high humidity, lesions on the underside of leaves may develop a dark gray to purple, downy like appearance (Figure 2).

Under optimal conditions for disease, cucurbit downy mildew results in defoliation and complete plant death in a matter of days (Figure 3). Cucurbit fruit are not infected by the pathogen, but yield will decline due to leaf loss and the resulting reduction in photosynthesis.



**Figure 1.** Symptoms of cucurbit downy mildew begin as pale to bright-colored yellow spots that become irregular and blocky (**A**). Spots spread throughout the plant and develop into necrotic lesions (**B**).

Agriculture & Natural Resources • Family & Consumer Sciences • 4-H/Youth Development • Community & Economic Development

*Cucurbit Downy Mildew in Kentucky* (PPFS-VG-27) is available online. https://plantpathology.ca.uky.edu/files/ppfs-vg-27.pdf

For additional publications on vegetable diseases, visit the UK Plant Pathology Extension Publications webpage. https://plantpathology.ca.uky.edu/extension/publications


**By Cheryl Kaiser, Plant Pathology Extension Support, and Nicole Gauthier, Plant Pathology Extension Specialist**

# University of Kentucky Extension Resources for Commercial Fruit Production

The University of Kentucky Extension team has put together numerous resources for commercial fruit growers regarding production and pest management. The following details the resources provided by University of Kentucky specialists in entomology, horticulture, and plant pathology.

**College of Agriculture Publications**
Ag Communications – http://www2.ca.uky.edu/agcomm/pubs.asp

**Departmental Websites (publications, fact sheets, videos)**
Ag Economics – http://agecon.ca.uky.edu/extension
Biosystems Engineering (Ag Weather) – http://weather.uky.edu/
Center for Crop Diversification – https://www.uky.edu/ccd/
Entomology – https://entomology.ca.uky.edu/entfacts/
Horticulture – https://www.uky.edu/hort/documents-list-commercial-fruit-nut
Forestry – http://forestry.ca.uky.edu/wildlife
Plant Pathology – http://plantpathology.ca.uky.edu/extension/publications
Plant and Soil Sciences – https://pss.ca.uky.edu/extension15

**Newsletters**
KY Pest News – https://kentuckypestnews.wordpress.com/
Fruit Facts – http://www.uky.edu/hort/documents-list-fruit-facts

**E-mail Alerts (listserv)**
Contact Kim Leonberger (kimberly.leonberger@uky.edu) – Separate list servs for apple, peach, grape, blueberry, strawberry, and brambles

**Apps & Models**
Ag Models (Ag Weather) – http://weather.uky.edu/ky/agmodels.php
Disease and Insect Models (mobile version) – http://weather.uky.edu/dim.html
Scouting Guides for Problems of Fruit (mobile version) – https://fruitscout.ca.uky.edu/

**Social Media**
***Facebook***
KY Fruit & Veg Extension – https://www.facebook.com/KYFruitVegExtension/
Diseases of Fruit, Vegetables, and Hemp – https://www.facebook.com/KYPlantDisease/
Ag Weather – https://www.facebook.com/ukagweather/
Spotted Wind Drosophila in KY – https://www.facebook.com/SWDinKY//
UK REC Hort – https://www.facebook.com/people/Ukrec-Hort-Group/100057676561088/
UK Robinson Center – https://www.facebook.com/ukrobinsoncenter/
University of Kentucky Ag Programs – https://www.facebook.com/UKANR/
Center for Crop Diversification – https://www.facebook.com/CenterforCropDiversification/
***Instagram***
KY Fruit & Veg Extension – @KY_Fruit_Veg_Extension
***Twitter***
KY Fruit & Veg Extension – @KYFruit_VegExtn https://twitter.com/KYFruit_VegExtn
KY Plant Disease – @KYPlantDisease https://twitter.com/kyplantdisease?lang=en
UK Extension – @UKExtension https://twitter.com/ukextension?lang=en
UK Ag Weather Center – @UKAGweather https://twitter.com/ukagweather?lang=en
Southern IPM Center – @southernipm https://twitter.com/southernipm?lang=en
***YouTube***
Kentucky Fruit and Vegetable Extension – https://www.youtube.com/channel/UCRET-uFub4pdX0M6-YMaEBw
Nicole Gauthier, Plant Disease – https://www.youtube.com/c/NicoleGauthier

**Lab Services**
Plant Disease Diagnostic Laboratory (free) submit samples through county Extension offices
Soil Testing (fees vary) submit through county Extension offices – http://soils.rs.uky.edu/
Food Systems – https://fsic.ca.uky.edu/

**County Agents**
UK Extension Service – http://extension.ca.uky.edu/county

**By Nicole Gauthier, Plant Pathology Extension Specialist, and Kim Leonberger, Plant Pathology Extension Associate**

# Strange Tales of Yellowjackets in Appalachia

Late summer is a common time to encounter yellowjackets in flight throughout Kentucky. Typically, this is when they start to switch from foraging for protein sources (such as caterpillars and even carrion) and begin looking for more sugar-based foods. In a typical year, that means you can bump into them at fairs, festivals, picnics, and other outdoor events as they end up in garbage cans or they forage from fruits and sugary drinks you are enjoying outdoors. In 2024 though, there have been several reports from Eastern Kentucky Extension agents and residents that indicate yellowjacket population numbers are extremely high in Appalachia and that these wasps are appearing in "clouds" where they appear to be hovering and foraging over turf areas. In addition, these reports have included details about increased encounters when mowing or performing other landscape maintenance, and as a result, more stinging incidents. This will hopefully provide some background information on these striped stingers and tips on how to navigate them.

What are yellowjackets?

Yellowjackets are smaller social wasps (compared to other species); they tend to be about a half-inch long and are distinctive for their bright yellow and black coloration. There are multiple species that live in Kentucky, the southern, eastern, and German yellowjackets for example. Identification is based on patterns on the abdomen, rather than their accent as the names may imply.

Depending on the species, they may build their nest in the ground, using abandoned rodent burrows typically, in trees or shrubs, or in attics/wall voids of buildings. In these locations, the queen yellowjacket will initially start the nest on her own; the new workers that she produces help to expand the structure and maintain it. As summer goes on, the papery football-shaped nest will contain thousands of workers and the original queen. Eventually, the queen will stop making new workers and switch to producing new queens. These new queens will overwinter nearby, but the rest of the colony will perish at season's end.

***Figure 1:*** *Yellowjackets are relatively small social wasps; they pack a big punch when they sting though. Their bright yellow and black coloration also separates them from other stinging species. (Photo: Jim Kalisch, UNL Entomology).*

Yellowjackets are predatory wasps for most of the summer. They can be seen capturing and killing pest caterpillars, amongst other insects. Yellowjackets also commonly visit roadkill to slice off strips of meat and may even visit your sandwich if you set it down. When summer is winding down and their food supplies are dwindling, they switch to sugary foods. This also coincides with when new queens are being made. As a result, yellowjackets are around humans more often at this time of year, and they are a little bit surlier than they were back in May.

What's happening in Easter Kentucky?

It's unclear as of this publication what is driving the numbers of yellowjackets so high in our easternmost counties. Similar reports are being made in West Virginia, seemingly indicating that this isn't restricted to just Kentucky but possibly is happening in many Appalachian counties.

Some possible explanations might include more queens being able to survive after the mild winter between 2023 and 2024. With more queens, more nests could have been established resulting in the densities being seen. There is also the possibility that there is another insect having a banner year, which is providing food for yellowjackets. Some reporters have included statements that yellowjackets are seen in lawn or turf areas, hovering, and they seem to be catching insects or collecting something. If a caterpillar or sawfly species is in high numbers, they could be preying on them or alternatively, honeydew-making insects are leaving vast amounts of sugary fecal material for wasps to forage on.

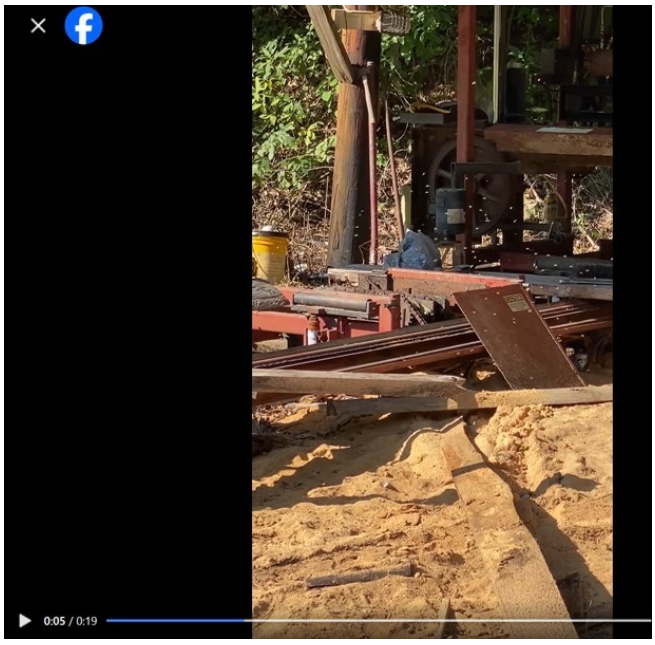



***Figure 2:*** *This screengrab from a video found on Facebook (the person's name is omitted for privacy) shows a scene with hundreds to thousands of yellowjackets buzzing in an area (click on the photo to enlarge).*

Issues & possible solutions

Most negative interactions with yellowjackets occur because a human has somehow messed with their nest. Usually this is when mowing or weed eating, cutting down a tree, or going into an outbuilding that is infested. If a colony's entrance is easily discernible, it is possible to treat the colony with an aerosol or dust insecticide. This is usually easier when the nest is in-ground or in a building. Aerosol products, like Raid Wasp & Hornet, include special triggers that allow you to apply them from a distance and typically work in a few seconds. They should be applied at dusk or night to maximize kill and minimize chances of being stung. Applicators should still wear longer sleeves and pants and be prepared to leave the area quickly with an escape route in mind. Dust insecticides, like Sevin dust, can applied into nest entrances using a puff applicator or a turkey baster (never to be used on turkey again). This should also be done at night; dusts work much slower as well, so be prepared to get away.

When nests are numerous, it might be tempting to try and treat a whole yard. Spraying liquid products on top of the ground ***will not work***. The insecticides that work best against yellowjackets will bind to soil and organic matter in their liquid form, rendering the insecticide ineffective. Aerosols and dusts don't do this.

When yellowjackets are away from the nest, they usually aren't as aggressive. If they are hit or swatted, that can change though. If you walk into an area with large clouds of wasps, slowly back out the same direction that you came. Do not attempt to go through them and do not try to disperse them by swatting or waving at them.

Images from Eastern Kentucky have shown clouds of wasps in what have been called "biblical proportions." This is frightening and potentially dangerous. You can't simply start treating these large groups with insecticides, unfortunately. There isn't an easy or effective way to do so without putting yourself at risk of exposure. You can, however, trap these large groups out using various trap designs.

There are many yellowjacket trap designs for sale at hardware stores and online retailers. There are just as many at home DIY traps designs seen on Pinterest, Facebook, and other social media platforms.

I will outline one simple trap that most people will be able to create out of objects in their home. All you will need is an empty two-liter bottle, a box cutter or knife, liquid soap, and an attractant. Using your sharp object, cut the top 1/4 or 1/3 of the bottle off of the two-liter. Flip the cut off section over so that the spout points down, creating a funnel. Insert this funnel into the other bottle section. You have now created something the wasps can enter but rarely leave. Fill the bottom portion of the bottle with about an inch of an attractive substance. At this time of year, fruit juice, soda pop, cheap red wine, or another sugary beverage would be best. Then, add 2 to 3 drops of liquid dish soap. Now wasps will fall into the liquid and drown. Set the trap in an area with many wasps and over 1 to 3 evenings it will fill with dead yellowjackets. You can construct and deploy multiple traps to try and destroy even more of them. You might even experiment with different attractants to see which works the best.

**By Jonathan L. Larson, Entomology Extension Specialist**


***Figure 3:*** *This screengrab from a video on YouTube shows the basic two-liter bottle trap that can be deployed to try and capture as many yellowjackets as possible (Source: https://youtu.be/GVLqEb6ANig?si=svvu_Dm8eNpXyH9T).*

Martin-Gatton
College of Agriculture,
Food and Environment

## MASTER GARDENER TOOLBOX

# HYDRANGEA

Mary Dossett, Horticulture Agent, and Savannah Gilbert, Horticulture Assistant, will be educating the public on all things hydrangeas.

**SEPTEMBER 3RD, 2024 5PM-6PM CST**


EXTENSION AGENT FOR HORTICULTURE

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**MCCRACKEN COUNTY EXTENSION SERVICE**
**2025 NEW HOLT RD**
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# Green Bean Bundles

**1 pound** fresh green beans
**¼ teaspoon** black pepper
**12 slices** turkey bacon
**2 tablespoons** unsalted butter
**2 cloves** garlic, minced
**⅛ teaspoon** ground cinnamon
**¼ teaspoon** allspice

**1. Preheat** oven to 400º F.

**2. Remove** ends and strings from beans. Wash and dry beans thoroughly and season with black pepper.

**3. Bundle** together 5-8 beans and wrap with a strip of turkey bacon to hold them together.

**4. Lay** each bundle, seam side down in a large baking dish. In a small saucepan, heat butter, garlic, cinnamon and allspice over low heat, whisking until butter is melted.

**5. Brush** the mixture over the top of each green bean bundle with a pastry brush.

**6. Cover** with foil and bake for 35 minutes.

**7. Remove** foil and bake for 15 additional minutes, until bacon is crisp.

**Yield:** 12 bundles

**Nutritional Analysis:** *60 calories, 5 g fat, 2 g saturated fat, 20 mg cholesterol, 170 mg sodium, 3 g carbohydrate, 1 g fiber, 1 g sugar, 3 g protein.*

Buying Kentucky Proud is easy. Look for the label at your grocery store, farmers' market, or roadside stand.

Plate it up! Kentucky Proud

# Kentucky Green Beans

**SEASON:** June to September

**NUTRITION FACTS:** One-half cup of unseasoned green beans has 15 calories, is low in fat and sodium, and provides fiber, vitamin A, and potassium.

**SELECTION:** Choose slender, firm, smooth, crisp beans with slightly velvet-like pods and a bright color. Beans should be free of blemishes and have small seeds.

**STORAGE:** Beans should be stored unwashed in plastic bags in the refrigerator crisper for 3 to 5 days. Wash just before preparation.

**PREPARATION:** Wash and remove stems and strings. Cook by steaming in a small amount of water, until tender-crisp, about 5 to 8 minutes. They can be cooked directly in soups or stews. Green beans go well with seasonings such as chives, dill, marjoram, mint, oregano, thyme, lemon, mustard, or onion.

**Source:** www.fruitsandveggiesmatter.gov

**GREEN BEANS**
**Kentucky Proud Project**
County Extension Agents for Family and Consumer Sciences
University of Kentucky, Nutrition and Food Science students
**July 2012**



COOPERATIVE EXTENSION SERVICE
UK University of Kentucky College of Agriculture, Food and Environment