

# FOCUS

Teaching, Research and Outreach in  
the Division of Agriculture, Forestry  
and Veterinary Medicine

## Raising Food at Home Provides Sense of Self-Sufficiency

With today's high fuel prices and uncertain economy, many Americans have begun raising their own food. Those who have taken on that challenge have discovered other benefits as well. Besides enjoying an increased sense of security and nutritious meals, people who grow their own food also have an opportunity to spend time outside, whether alone or with loved ones. Some even discover a lifelong hobby.

From starting a vegetable garden to tending chickens or honeybees, raising food provides an escape from the hustle and bustle of everyday life. Taking on this task could be overwhelming, but experts at Mississippi State University offer the advice and resources needed to help make growing food less daunting.

## Fresh Produce Livens Existing Home Gardens



Scott Corey

Gardeners can literally reap the fruits of their labor by planting fruits or vegetables in a small space in their landscapes.

Many gardeners tend to their landscapes as a hobby, which requires hours of manual labor and a big financial investment. But this does not have to be the case. Many existing home landscapes are well suited for growing fruits and vegetables.

Bob Brzuszek, associate professor of landscape architecture at Mississippi State University, said people do not need to build a farm to get fresh food from their yards.

"Your home vegetable garden doesn't have to be in raised beds or in straight, raised rows. Traditionally, these practices have been instituted to accommodate machines, which are not really necessary for a small home garden," Brzuszek said. "Gardeners can simply tuck seasonal vegetables in between existing ornamental plants in the landscape."

While they may not be as attractive as zinnias or daisies, vegetables can be just as appealing if people look beyond beauty to see true value.

Inexpensive seeds or starter plants for fruits and vegetables can be bought at local establishments across the state. Almost all commonly grown fruits and vegetables are easy to preserve, which provides cost savings and nutritious alternatives throughout the year.

“Research shows that storing fresh produce either through canning or freezing preserves almost all of the nutritional value of the produce. Freezing is the easier of the two options, but it does require more space,” said Brent Fountain, human nutrition specialist with the MSU Extension Service. “Canning requires less space but needs specialized equipment. However, the cost of that equipment has come down in recent years.”

Sylvia Byrd, associate professor in the MSU Department of Food Science, Nutrition and Health Promotion, suggested gardens offer other benefits.

“The big advantage is that gardening provides physical activity, which is an integral part of a healthy lifestyle,” she said. “In addition, research demonstrates that children who participate in gardening and food preparation are more likely to

consume fruits and vegetables as a regular part of their diet.”

Community gardens are a good alternative for those who do not have space in their residential gardens for food production.

“Community gardens are becoming common across the country,” said Chris Company, assistant professor of landscape architecture at MSU. “The pooled resources of a community garden provide extra benefits and can expand the potential for space- and sunlight-deprived gardeners.”

There are alternatives for those who lack an interest in gardening but still want access to freshly grown produce.

“Much of the food purchased in local grocery stores or large retail chains is not as fresh as locally grown produce because it may travel 2,000 miles before it settles on the retail shelves,” Byrd said. “Even if you don’t grow your own food, you can buy from others who do grow locally, supporting local farm businesses.”

For more information about planting and maintaining fruit and vegetables, view Extension Publication 1091, the “Garden Tabloid” (<http://msucares.com/pubs/publications/p1091.pdf>).

## Backyard Chickens Provide Fun Way to Enjoy Fresh Eggs



*Kat Lawrence*

Many people find that raising backyard chickens is not only an easy way to provide their family fresh eggs, but it is also a rewarding pastime.

“Raising poultry for egg production has become increasingly popular during the last few years,” said Danny Thornton, a poultry specialist with the MSU Extension Service. “With the

current economic situation, a lot of people are hoping to save money on food by raising their own birds for egg production.”

Thornton said raising a small flock can be relatively simple if owners are willing to put in the work to get started and to keep the birds healthy and well fed. Getting started requires setting up appropriate shelter before the birds arrive.



Kat Lawrence

“Coops do not need to be elaborate. The shelter should be dry and provide adequate protection from cold or rainy weather,” Thornton said. “You should allow about 1 square foot of floor space per chick and also provide a fenced-in run outside of the coop.”

Letting the birds run loose can potentially expose them to diseases. Keeping them separated from wild birds can limit their exposure to viruses and internal parasites, Thornton said.

“Poultry owners should always follow good biosecurity practices such as keeping equipment clean and disinfected,” Thornton said. “It is a good idea to keep a separate pair of boots to wear only when working with your birds. That way, you don’t track bird feces into your house or bring unwanted parasites and germs out to your flock.”

Thornton said maintaining a flock is not expensive, but owners need to properly feed their birds and provide simple veterinary care.

“Don’t skimp on feed. Poultry need to have a balanced corn- and soybean-based diet with calcium phosphorus,” he said. “They don’t need extensive veterinary care or vaccinations, but they should always be vaccinated for fowl pox.”

Thornton said good feed is reasonably priced and helps provide people with better quality eggs.

There are initial costs with getting started, but backyard

bird owner Alicia Barnes of Starkville said the birds could quickly earn their worth.

“The biggest expense was in the shipping costs with the birds we purchased,” she said. “Not only are we getting eggs from them, but they also provide free pest control. Chickens will spend their entire day eating pests from the yard. Our birds are saving us on the cost of pesticide.”

Barnes researched raising backyard flocks before purchasing her first chick and has found poultry ownership to be manageable.

“Chickens take care of themselves as long as you provide safe shelter. Setting up the coop and run to keep out predators took the most work,” she said.

Barnes said she believes her chickens offer her and her husband significant health benefits. She manages their diet and environment carefully.

“I learned a lot about the nutritional benefits of eating eggs raised in a free-range environment,” she said. “Turns out ‘you are what you eat’ also applies to animals.”

Thornton said chickens can serve as more than just a food source to their owners.

“There is no shortage of good eggs here in Mississippi. With Cal-Maine here in our state, we have access to commercially produced quality eggs,” he said. “What I find people enjoy most about these backyard flocks is that they can serve as a great hobby.”

Thornton said many retirees across the state enjoy keeping their own birds. Parents find backyard flocks are a good way to teach their children about responsibility.

“It is a good opportunity for children to learn about poultry and the care they need,” he said. “Kids can be put in charge of feeding the chickens, cleaning the coop and collecting eggs.”

Chickens range in color and size, some with large, fluffy crests and others with bright red feathers. Some people purchase chickens based on the traits certain breeds have. Some breeds have been described as good layers, while others are said to be protective and maternal.

Barnes enjoys learning about the many breeds and understanding their different personalities.

“I like pretty chickens, not just the plain white fryers,” she said. “We have a Silver Winedot and a Buff Orpington mix, and we just received three speckled Sussex chicks, two Partridge Cochin chicks and three Buff Laced Polish chicks.”

Raising chickens has become a labor of love for Barnes.

“My favorite part about keeping chickens is holding them at the end of the day,” she said. “When the sun starts setting, they get quiet and still. My adult chicken will go roost on our fence and then I sit her on my lap and pet her as she coos before she puts herself in the coop.”

For more information on biosecurity measures that should be taken when raising a backyard flock, visit [http://www.aphis.usda.gov/animal\\_health/birdbiosecurity/](http://www.aphis.usda.gov/animal_health/birdbiosecurity/).

## Bees Provide Sweet Success for Keepers



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*Keri Collins Lewis*

Mississippians are finding that beekeeping can be a challenging hobby, a profitable business or a good way to learn more about one of nature's most interesting insects.

There are nearly 1,000 people in Mississippi who keep bees for profit or for hobby, and the number is steadily growing.

"We've been teaching beekeeping short courses across the state and have had close to 100 or more in some of the classes," said Clarence Collison, retired head of the MSU Department of Entomology and Plant Pathology. "Interest in beekeeping seems to ebb and flow. Right now, we are seeing a sharp increase in interest."

Collison said enthusiasm about beekeeping might stem from a widespread interest in sustainable food systems. Bees provide a popular food and also help farmers with their crops.

"Bees provide honey, a quality natural ingredient that many people like to keep in the kitchen," he said. "There are many experts who claim that eating locally made honey can help with allergies. The theory is that when you consume raw honey, you also get the wind-borne pollen the bees put into the honey, which over time can help build a resistance to seasonal allergies. Some allergists even recommend eating local honey for this reason."

Collison said bees are also important pollinators of crops, and many farmers find that bees help improve their produce-growing operations. Many U.S.-grown crops rely on an introduced pollinator, like the honeybee, to continue producing fruits and vegetables.

"Bees aren't just an asset to commercial growers, but they also help your average gardener," he said. "Keeping bees on your property can really enhance a landscape and garden."

Collison said getting started is the most expensive part of beekeeping. Those interested in keeping the insects will have to purchase hives and equipment.

"Equipment needs vary with the size of the operation and the number of colonies," Collison said. "The basic equipment needed are the components of the hive, protective gear, smoker, hive tool and other tools for handling the honey."

Mark Lewis of Lowndes County is new to beekeeping and said getting started is time-consuming, but learning about bees and their care is interesting.

"I have enjoyed meeting all of the people involved in beekeeping and appreciate how generous they are with their time, tips and insight," he said. "There are as many ways to keep bees as there are beekeepers."

Lewis plans on keeping enough hives to one day sell honey, but for now, he is still learning about the care and work the bees require.

"It is a little more work than I initially thought. It's not like you can just put the bees out there and let them do their



Keri Collins Lewis

thing," he said. "I think if you are doing this as a hobby, you can be a little less involved. To make high-quality products to sell, however, you need to be more active in your monitoring and involvement."

Vanik Eaddy of Oktibbeha County has been keeping bees for 10 years and finds the work hard but rewarding. He started keeping bees after his son encouraged him to get into beekeeping as a hobby. Today, Eaddy sells fresh honey to retailers in West Point, Columbus and Starkville.

"The primary work is done between March and October. The challenge there is doing work during the hot summer months," he said. "It is also a significant investment because we are producing a food product and working

with live animals."

Collison said many retirees sign up for beekeeping workshops and find beekeeping to be an enjoyable pastime.

"Those looking to sell honey need to keep about 30 to 50 hives, and that can create a lot of work," he said. "But someone looking to just learn about bees and keep them around as a hobby will only purchase a few hives. It is only as much work as you want to make it."

One aspect of beekeeping is building a relationship with the bees, Collison said.

"They are fascinating creatures and teach us so much about the ecological environment," he said. "You don't have to make a profit on the products they produce to reap the rewards of beekeeping."

## Homemade Baby Food Benefits Entire Family

Homemade baby food gives parents the advantage of controlling what goes into their babies' sensitive stomachs and provides health benefits for the entire family.

"Providing babies with homemade baby food made of fresh fruits and vegetables can help instill taste and preference for these healthy food choices while avoiding preservatives and additives," said Brent Fountain, human nutrition specialist with the Mississippi State University Extension Service. "Having these items on hand also provides additional opportunities for other family members to eat fruits and vegetables they might not normally eat."

Fountain said that with children, "more is caught than taught," meaning they learn by example.

"If babies smell fresh asparagus on their parents' dinner plates, they are more likely to want to eat it when it is given to them," he said. "They are consuming some of what parents are

preparing for themselves, and this can help them be more enthusiastic about the food in front of them."

Fountain said preparing homemade baby food is simpler than most people think.

"Parents can make food for their baby at the same time they are making their own meal," Fountain said. "Steam some fresh vegetables for the family and put some aside to process into a smooth consistency for the baby. Breastmilk, formula or water can be used to help smooth and liquefy the pureed food."

Parents can spend just a few hours every week or two to prepare and freeze vegetables and fruit to use later. Ice trays and silicone muffin tins are appropriate serving sizes for babies, and retailers also make special baby food freezer storage trays.

"I encourage parents to use plastic products that are



Sara Stone

labeled 'BPA-free' for storing baby food," Fountain said. "The Food and Drug Administration raised some concerns about Bisphenol-A, or BPA, and in general, it is just good to err on the side of caution."

Diane Tidwell, associate professor in the MSU Department of Food Science, Nutrition and Health Promotion, said parents need to take food safety measures seriously when preparing food for their infants.

"Parents should always use proper sanitation by using clean cooking utensils and preparing food on clean surfaces," she said. "Also, the food shouldn't sit out for very long. Keep the baby food refrigerated and throw it out if it doesn't get eaten within four days of preparation. All frozen foods should be consumed within 24 hours after thawing and should not be refrozen."

Tidwell said parents should not warm their infants' food in the microwave.

"There is just no way to get the food evenly heated in the microwave. It can create little hot spots that can burn a baby's mouth," she said. "Steaming the fresh food before use is the best way to preserve the vitamins, and heating up in a saucepan is the safest way to get the food warm."

Avoid giving babies under a year any highly allergenic ingredients, such as peanuts, cow's milk, wheat, fish and soy, Tidwell said.

"Parents should not season baby food with salt or sugar; neither is healthy, and they are really unnecessary," Tidwell said. "It is also important to never give a baby under 12 months of age honey, as it can lead to infant botulism."

Fountain said solids can be introduced to children between ages 4 and 6 months, but they should not be the main source of calories.

"Up until a year old, breastmilk or formula should be the biggest nutrition source. We always like to remind parents that breastmilk is the gold standard, and feedings should not decrease significantly with the introduction of solids," he said. "Start out slow and introduce vegetables first and then fruit."

Expose babies to a variety of fresh seasonal produce such as sweet peas, green beans, asparagus, peaches, sweet potatoes, pears and bananas. Parents should introduce one food at a time and

wait three to four days before trying something new to monitor for any allergic reactions, Fountain said.

"Families should use variety and have fun trying out new foods. Parents shouldn't get discouraged if their baby rejects certain foods," he said. "Often, a baby will turn down a food because of its consistency or temperature rather than its flavor. It is easy just to add more liquid or allow the food to cool to help make it more palatable."

Fountain said giving babies the opportunity to sample fresh ingredients should be a fun experience.

"There is a sense of self-sufficiency in introducing a baby to fresh foods," Fountain said. "It really gives parents the confidence to become excellent role models for helping their child learn to love and enjoy healthy foods."