



EXTENSION

Establishing a New Vegetable Garden

David Hillock, State Master Gardener Coordinator

The past year has been a real challenge for a lot of people, but if anything good has come of it, there has been a surge in gardening activity and a desire to be outdoors. And why not? Gardening and being out in nature can be so rewarding and has proven to be therapeutic. If you are considering gardening for the first time or just want to get better at it, here is some information that will help get you started.

Site Selection

- Sun exposure: select a site that receives at least 6 hours of direct sunlight each day. Southern exposures are ideal for greatest sun incidence.
- Soil: Well-drained soils such as sandy loam provides ideal conditions for growing vegetables. Soil pH near 6.6 is optimal. Avoid steep slopes where erosion will be a problem.
- Air flow: avoid low-lying areas as these tend to collect cold air which slows germination and plant development in spring.
- Avoid placing a vegetable garden near walnut trees. Walnuts exude a substance called juglone from their roots which is allelopathic, meaning it can kill other plants. Tomatoes and other solanaceous plants are highly sensitive to juglone.
- Make sure the site is situated near a water supply.

Removing Vegetation

It is important to start with a clean slate when preparing a new garden bed. And this means removing existing vegetation and controlling weeds. Usually, this is a chore for the summer prior to planting. There are several methods available to kill off vegetation. The most common method is to apply an herbicide, but there are other non-chemical methods such as solarization and smothering.

Solarization is a simple technique that captures radiant heat energy from the sun and uses that heat to kill seedlings and weed seeds, as well as some soil-borne disease organisms. Sheets of plastic are used to trap the solar heat. Solarization is commonly used to kill weed seeds in areas where the vegetative layer has been removed.

To smother weeds, cover the soil with black plastic, or several layers of newspaper. Carpet or boards have also been used for smothering.

Solarization can be combined with other control methods. For example, an herbicide may be used to make the initial kill, then solarize to control subsequent seedlings and kill seeds in the soil. Solarization can also be combined with the application of soil amendments and fertilizers. In fact, solarization can speed up decomposition of organic matter, releasing soluble nutrients into the soil. (Continued Pg. 3)

Kay County OSU Extension Office

Address

Kay County Courthouse Basement
P.O. Box 430
Newkirk, OK 74647

Phone

Office Main Line - (580) 362-3194

Email

Shannon Mallory: - Ag/4-H Educator
Shannon.mallory@okstate.edu

Website

oces.okstate.edu/kay/ag

Social Media

Facebook: Kay County OSU Extension
Twitter/Instagram: @CountyKay
YouTube: Kay County OSU Extension



In this issue

Baby Chicks 2

Spring has Sprung, and the little animals are being born. Barry Whitworth tells you how to select and prep for baby chickens.

Upcoming Events 3

Keep yourself up to date on OSU Extension Events and other Agricultural and Educational events in the Kay County Area

Garden Tips 4

David Hillock shares his Monthly Garden Tips.

Prescribed Burn 5

Opportunities are coming up for citizens to learn, and practice prescribed burning.



Purchasing Spring Chicks

Barry Whitworth, DVM Area Food/Animal Quality and Health Specialist

Raising chickens in the backyard has become very popular in Oklahoma. Some people desire a better understanding of how their food is produced. Others like the rewarding experience of going out in the backyard and gathering eggs. For children and young people, poultry make a good 4H or FFA project. However, many backyard producers may not be aware of diseases that might threaten their chickens as well as their own health. As the time to purchase new chicks approaches, backyard poultry enthusiasts need to keep these thoughts in mind when buying chicks.

In a review of the common causes of death in backyard poultry in the United States, Dr. Cadmus

and associates found that 41% of all dead birds submitted for necropsy were diagnosed with some form of cancer. Marek's disease was the most common cause of the cancers. Bacterial infections were the next most common cause of death. *Escherichia coli* was the bacterium found most often followed by *Mycoplasma* species. Viral organisms such infectious bronchitis virus, infectious laryngotracheitis virus, and avian pox virus were the most common viruses responsible for death in some birds. Parasites only accounted for a small number of deaths (2.6%), but they were a common secondary finding. The most common parasite to cause

death was coccidia and was most often found in birds less than 4 months of age.

One-way producers can avoid diseases in their flocks is to purchase birds from a National Poultry Improvement Plan (NPIP) certified hatchery. The NPIP was initially started in the 1930s to eliminate *Salmonella pullorum* from chicks which was highly fatal. Today, NPIP hatcheries monitor and test for a variety of diseases. Purchasing chicks from a NPIP flock will not prevent every disease but it should provide confidence that the chicks are coming from a healthy flock.

In addition to purchasing chicks from a NPIP flock, chicks should be (Continued Pg. 5)

New Vegetable Garden (Continued)

Whatever method is used, it is ideal to control perennial weeds before establishing a new garden. It will be much easier to manage them before you have the area planted with vegetables.

Soil preparation

Once the vegetation is removed, till the soil to loosen it. This is a good time to add manure or other organic material. To preserve soil structure, avoid tilling when the soil is too wet. To determine if the soil is too moist for tilling, grab a handful of soil and squeeze it slightly. If it sticks together in a ball it is too wet. If it crumbles easily it is ready.

How to Collect Soil for Testing

Soil tests should be included as part of garden preparation. It is easier to amend soils and add nutrients before planting, rather than after. Soil tests collect information on soil nutrients and pH.

When collecting soil samples, test areas with drastically different soil conditions separately. To get started you will need a tool for collecting small samples. A soil probe is a great tool for sampling if you have one. A shovel or even a small bulb planter can also be used. You will also need a bucket for sampling. You should obtain a representative sample for each area being tested. To do this, collect several samples from across the entire area being sampled and combine them into a single, representative sample. Take samples to a depth of six inches. In a large garden, as many as 15 to 20 cores should be taken.

Make sure to use a clean bucket that does not have any cleansers in it. Many cleaners contain chemicals that could alter your soil test results. Mix samples taken from one area together, then fill the sample bag for analysis.

Sample bags are available at your county extension office, where soil samples may also be submitted. The samples are sent to the OSU Soil, Water, and Forage Analytical Laboratory for testing. Tests cost \$10 each, and evaluate soil pH, nitrate nitrogen, phosphorous and potassium contents. You can also request micronutrient tests as well as organic matter content and other specific tests. Test results include fertilizer recommendations specific to the type of vegetation growing on the site. Be sure to mark the proper space on the sample label indicating the type of area sampled, such as turf or garden.

Extension [L-249](#) contains detailed information on collecting soil samples.

Don't forget that even if you don't have a large space for an in-ground garden, container gardening can also be done successfully. For information about growing in containers see our fact sheet [HLA-6458 Container Gardening](#).

UPCOMING EVENTS and DATES

March 13th, 2021 – Whitetail Deer Management in the Off Season
9a.m.-11a.m.
Stagecoach Event Center, Newkirk, OK
Speakers: OK Department of Wildlife Conservation, OK
Prescribed Burn Assoc., OSU Extension Specialist

April 1st, 2021 – K-O Prescribed Burn Association Membership Drive
6:30p.m.-8:00p.m.
Stagecoach Event Center, Newkirk, OK
Speakers:
John Weir, Prescribed Fire Associate Extension Specialist
Cooper Sherill, K-O Burn Association President
New Member Dues \$25/yr. FREE BBQ Dinner with Dues!
Contact Jason Grace (580)716-2150 to RSVP



Gardening Tips for March!

David Hillock, State Master Gardener Coordinator

Lawn and Turf

- Remove excessive thatch from warm-season lawns. Dethatching, if necessary, should precede crabgrass control treatment. ([HLA-6604](#))
- Broadleaf weeds can easily be controlled in cool-season lawns at this time with post-emergent broadleaf herbicides.
- Preemergent crabgrass control chemicals can still be applied to cool- and warm-season turfgrasses. Heed label cautions when using any weed killers near or in the root zone of desirable plantings.
- March is the second-best time of the year to seed cool-season turfgrass; however, fall is the best time to plant. ([HLA-6419](#))
- Cool-season lawns such as bluegrass, fescue, and ryegrass may be fertilized now with the first application of the season. Usually, four applications of fertilizer are required per year, in March, May, October, and November. ([HLA-6420](#))
- Begin mowing cool-season grasses at 1½ to 3½ inches high. ([HLA-6420](#))

Flowers & Vegetables

- Cultivate annual flower and vegetable planting beds to destroy winter weeds.
- Apply mulch to control weeds in beds. Landscape fabric barrier can reduce the amount of mulch but can dry out and prevent water penetration. Thus, organic litter makes the best mulch.
- Prune roses just before growth starts and begin a regular disease spray program as the foliage appears on susceptible varieties. ([HLA-6403](#) & [EPP-7607](#))
- Avoid excessive walking and working in the garden when foliage and soils are wet.
- Start warm-season vegetable transplants indoors.
- Divide and replant overcrowded, summer and fall blooming perennials. Mow or cut back old liriopse and other ornamental grasses before new growth begins.
- Your cool-season vegetables like broccoli, cabbage, carrot, lettuce, onion, peas, spinach, turnips etc. should be planted by the middle of March.
- Watch for cutworms that girdle newly planted vegetables during the first few weeks of establishment. Cabbage looper and cabbageworm insects should be monitored and controlled in the garden. ([EPP-7313](#))

Trees & Shrubs

- Prune spring flowering plants, if needed, immediately following their bloom period.
- Plant evergreen shrubs, balled and burlapped, and bare root trees and shrubs.
- Anthracnose control on sycamore, maple, and oak should begin at bud swell. ([EPP-7634](#)).
- Diplodia Pine Tip blight control on pines begins at bud swell.
- Chemical and physical control of galls (swellings) on stems of trees should begin now. ([EPP-7168](#) & [EPP-7306](#))
- Dormant oil can still be applied to control mites, galls, overwintering aphids, etc. ([EPP-7306](#))
- The first generation of Nantucket Pine Tip Moth appears at this time. Begin pesticide applications in late March. ([EPP-7306](#))
- Control Eastern tent caterpillars as soon as the critters appear.

Fruits

- Continue to plant strawberries, asparagus, and other small fruit crops this month.
- Start your routine fruit tree spray schedule prior to bud break. ([EPP-7319](#)).

Purchasing Spring Chicks (Continued)

vaccinated for certain diseases early in life. As mentioned earlier, Marek's disease is one of the leading causes of death in backyard chickens. The disease can be easily prevented by vaccinating the chicks on day 1 or in ovum prior to hatching. Most hatcheries will provide this service for a small fee. Consult with a poultry specialist and/or a veterinarian for other diseases that can be prevented with vaccinations.

Although parasites in Dr. Cadmus review did not account for a high number of deaths, routine monitoring of parasites is a good habit. Coccidia, which was the most common parasite found to cause fatalities, damages the intestine which results in digestive problems. To combat this parasite, chicks should be placed on a coccidiostat which is usually administered in the water or feed. There are a few different coccidiostats available, so consult with a poultry specialist and/or veterinarian for the best option.

Of all disease prevention options available to backyard poultry producers, biosecurity is the best. Biosecurity is a series of management practices designed to prevent the introduction and spread of disease agents on a poultry operation. Backyard poultry producers can find information on biosecurity at <http://healthybirds.aphis.usda.gov>. Also, Oklahoma State University Cooperative Extension has an excellent fact sheet *Small Flock Biosecurity for Prevention of Avian Influenza* ANSI-8301 which can be obtained at the local OSU County Extension office or at <https://extension.okstate.edu/fact-sheets/small-flock-biosecurity-for-prevention-of-avian-influenza.html>.

Lastly, backyard poultry producers may not be aware of the dangers that poultry can have on human health. Since birds usually do not show any clinical signs of being ill, they shed organisms in their feces and other bodily fluids without producers realizing they are endangered. Several of these pathogens that infect poultry can also infect humans. Every year the Center for Disease Control and Prevention (CDC) investigates *Salmonella* infections in humans associated with backyard poultry. In 2020 there were 1,722 cases of *Salmonella* infections in people in 50 states. Three hundred thirty-three people were hospitalized with the disease. One person died from the bacterium. Twenty-four percent of the cases were in children under 5 years of age. In interviews, 66% of the sick people reported contact with chicks or ducklings. Oklahoma reported 15 cases of *Salmonella* infections and the lone death occurred in Oklahoma. It should be kept in mind that the CDC believes that for every 1 *Salmonella* case reported many cases go unreported.

The best way people can protect themselves from developing infections associated with backyard poultry is to practice good hand hygiene. Producers should wash their hands before and after having contact with their birds. Children under 5 years of age need to be supervised when around poultry. This group needs to especially practice good hand hygiene.

Raising backyard chickens can be very rewarding. However, it can be very disheartening to have an illness such as Marek's disease or coccidiosis wiped out a flock. These diseases and others can be prevented by purchasing poultry from a NPIP flock, vaccinating for certain diseases, monitoring the health of birds routinely, and following a biosecurity protocol. Producers should not forget to protect themselves by practicing good hand hygiene. For more information about backyard poultry, producers should consult with their veterinarian or Oklahoma State University Cooperative Extension Ag Educator.

Do you need to burn your property?

Please consider joining the Kay-Osage Prescribed Burn Association at their Member Drive in Newkirk, OK on April 1st, 2021. John Weir of Oklahoma State University will be speaking on building a burn plan, then Cooper Sherril, K-O Burn Association President will be speaking on how to become a member, and learn how the Prescribed Burn Association helps landowners work together to burn property. Membership is \$25/year, and gets you access to burn equipment, help from other landowners, and knowledge of proper burning procedure from those who've been burning for most of their life. RSVP to Jason Grace (580)716-2150

Kay County Agriculture Monthly is a monthly newsletter, published as an educational service
by Kay County Oklahoma Cooperation Extension
201 South Main, Newkirk, Oklahoma 74647
Office 580-362-3194 Fax 580-362-2268
shannon.mallory@okstate.edu
www.oces.okstate.edu/kay/



Shannon Mallory, Extension Educator, Agriculture/4-H Youth Development

Oklahoma State University, as an equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. Oklahoma State University is committed to a policy of equal opportunity for all individuals and does not discriminate based on race, religion, age, sex, color, national origin, marital status, sexual orientation, gender identity/expression, disability, or veteran status with regard to employment, educational programs and activities, and/or admissions. For more information, visit <https://eeo.okstate.edu>.

This publication, issued by Oklahoma State University as authorized by the Vice President of the Division of Agricultural Sciences & Natural Resources, was printed at no cost to the taxpayers of Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President of the Division of Agricultural Sciences & Natural Resources and has been prepared and distributed at a cost of \$0.06 for 1 copies.



**KAY COUNTY
EXTENSION**

«business»
«attn»
«address»
«city», «st» «zip»