

Larry Crouse**Extension Horticulture Agent****Beginning Beekeeping Program**

Bees and other pollinators play a significant role in our well-being. Without them and the work that they do we would live in a much different world. Not every plant or crop is reliant on bees and other pollinators, but the list starts with Apples and goes through Zucchini. It is difficult to overstate their importance to agriculture and feeding the people of this world.

There will be a Beginning Beekeeping program on Thursday, February 16th, at 6:30 PM, at the Butler County 4-H Bldg at 206 N Griffith in El Dorado, KS. Sharon Dobesh, K-State Entomologist, will be presenting on what you need to know to get started in Beekeeping. There will be a \$5 fee for this program and light refreshments will be served. To register please call the Butler County Extension office at (316)321-9660 by February 10th.

Hanging Baskets & Annual Flowers Program

Have you noticed the beautiful hanging baskets in Downtown El Dorado the past several years? These are one example of what can be done with hanging baskets and other containers. Rita Arnold of Arnolds Greenhouses in LeRoy, KS will present a program on Tuesday, February 28th at 6:30 pm at the 4-H building in El Dorado. She will be covering the different strategies for container plants and hanging baskets and the annual flowers that do best in them. From what fertilizer to use and how often to use it, to the different types of containers that can be used and how those are put together, she will answer all your questions on the subject

There will be a \$5 fee for this program and light refreshments will be served. To register please call the Butler County Extension office at (316)321-9660 by February 24th.

Fungus Gnats

Fungus gnats are small insects (1/8 to 1/10 inch long) that are common in high-organic-matter houseplant soils that are kept moist. Though adults are mosquito-like in appearance, they do not bother humans or pets. It is actually the larvae or maggots that can injure plants by feeding on the roots. Symptoms include sudden wilting, loss of vigor, poor growth and yellowing leaves. Use of sterile media and avoiding overwatering can help prevent infestations. Existing infestations can be controlled *Bacillus thuringiensis v. israelensis* (Gnatrol).

The Differences in Tomatoes

Tomatoes are often classified as determinate, semi-determinate or indeterminate. Determinate plants produce one large crop and then virtually nothing thereafter. They are favored by commercial growers that want to harvest most of the fruit from one picking. They then use succession planting where a new crop is planted on a set schedule to have fruit production throughout the season. Mature plants are smaller than other types and can be planted closer together to get the most tomatoes from a set space. Primo Red is a variety that is strongly determinate. Indeterminate plants are the traditional tomatoes that never stop growing. They are capable of producing fruit throughout the season unless disease stops production or until frost kills the plant. They do best with support as they can reach six feet tall when staked or caged.

Semi-determinate plants are more compact than indeterminate types but are also capable of producing fruit throughout the season. Most of the varieties available to home gardeners are either indeterminate or semi-determinate. Though both are capable of producing fruit throughout the season, our hot Kansas summers often cause a dry spell in production of both types. Tomatoes are less likely to set fruit when night temperatures remain above 75 degrees and day temperatures are above 95. Hot, dry winds make the situation worse. Gardeners with limited space will likely prefer indeterminate or semi-determinate types to stretch out the harvest season. If there is space, you may want to grow a combination of all three with the determinates used to produce a large harvest for canning or tomato juice and the remainder for fresh eating.

More Tomato Trial Information

Last week we looked at tomato ratings from a trial done in Missouri with data from 2015 and 2016. This week we look at ratings done across Kansas during 2016 but from four separate sites. We looked at 10 different varieties and recorded the number of fruit per plant, the total number of pounds of fruit per plant and the average size of tomato in ounces. Results are below.

Tomato	Fruit/Plant	Lbs/plant	Avg oz/Fruit
Celebrity	43.03	22.40	5.80
Dixie Red	17.43	8.96	6.23
Ultrasonic	44.59	16.87	4.60
Summerpick	24.42	13.21	5.81
Defiant	66.68	15.61	2.80
Katana	26.05	9.14	4.37
Mountain Majesty	32.08	15.50	5.76
Jetstar	43.28	13.96	4.09
Chefs Choice	39.38	20.73	5.57
Burrells Special	35.62	13.64	4.44

Celebrity was our standard for determinate or semi-determinate tomatoes. We use Celebrity as our standard as it has proven to be an excellent tomato for years. All listed tomatoes are determinate or semi-determinate except the last three (Jetstar, Chefs Choice and Burrells Special). Celebrity continues to prove itself to be an excellent yielding tomato with more pounds per plant than any other in the trial. Fruit size was also very good with only Dixie Red surpassing it. The latter three are indeterminate types with Jetstar being the standard. In this case, Chefs Choice produced more pounds per plant than either Jetstar or Burrells Special. Chefs Choice also produced the largest fruit of the three.

Poisonous Plants

Some of the plants we commonly use in our homes, gardens and landscapes are poisonous. We often have requests from parents who want to make sure their plants are safe for young children.

The following poisonous plant list came from various University websites.

Flowers: caladium (all parts), cardinal flower (all parts), castor bean (seeds and leaves), daffodil (all parts), flowering tobacco {Nicotiana} (leaves and flowers), four-o'clock (roots and seeds), foxglove (all parts), hellebore (all parts), iris (all parts), lantana (unripe fruits and leaves), larkspur {Delphinium} (all parts), lily of the valley (all parts), lupine (all parts), monkshood (all parts), poppy (all parts except ripe seeds), snowdrop (bulb), spurge (milky sap), star-of-Bethlehem (all parts), sweet pea (seeds, seedlings, and pods), tulip (bulbs)

Houseplants: Chinese Evergreen, anthurium (all parts), aloe (sap if ingested), calla lily (all parts) croton (seeds, leaves, and stems), crown-of-thorns (milky sap), dieffenbachia (all parts), elephant ear (all fig (leaves, fruits, and sap), Jerusalem Cherry (all parts), mistletoe (all parts), Philodendron (all parts)

Fruits: apple (bark, leaves, seeds), pear (bark, leaves, seeds), apricot (bark, leaves, seeds, pits) peach (bark, leaves, seeds, pits), nectarine (bark, leaves, seeds, pits), plum (bark, leaves, seeds, pits) cherry (bark, leaves, seeds, pits), avocado (leaves, unripe fruit, bark, and seeds)

Landscape plants: azalea (leaves and flowers), black locust (all parts), Boston ivy (berries) boxwood (leaves and twigs), buckeye (leaves, shoots, bark, flowers, and seeds), burning bush (all parts), cherry (leaves, twigs, bark, and seeds), clematis (leaves), elderberry (roots, stems, bark, leaves, and unripe fruits), English ivy (all parts), golden chaintree {Laburnum} (all parts) holly (berries and leaves), horsechestnut (all parts), hydrangea (leaves and buds of some species) Kentucky coffee tree (seeds, fruit pulp, leaves, twigs), oak (acorns, leaves, and young shoots of some species), poison sumac (all parts), privet (all parts), rhododendron (leaves and flowers)

Virginia creeper or woodbine (berries), yew {Taxus} (all parts), wisteria (all parts).