K-STATE Research and Extension | Doniphan County
Ag News

Pest Control on Fruit Trees
Ward Upham, horticulture specialist at K-State

It can be a challenge to know how to spray fruit trees for pest control. Spray schedules will vary depending on whether the trees have fruit or not. Following are hints on what to spray this year for our most common fruit trees.

Peaches, nectarines and apricots: Check to make sure the fruit buds were not winter killed. Just touching dead buds at this time of year will cause them to fall off. These fruits are also very susceptible to late frosts as they bloom early. Trees that are in full bloom, become much more sensitive to frost damage than those with buds still closed. Temperatures at 28 degrees and lower will harm buds that are in full bloom.

If there will not be any fruit, there isn't any need for being on a spray schedule. If there is fruit, use a product that contains captan or myclobutanil (Immunox, Fertilome F-Stop Lawn and Garden Spray) from now until about two weeks before harvest. Spray about every 10 days.

If a specific problem develops such as borers, peach leaf curl or gummosis on peach, see our listing of common problems at our "Common Plant Problems in Kansas" website (https://bit.ly/2IOZP8E). Look under "Peach" for possible problems and what to do about them.

Cherries: We often have good fruit on cherries without spraying. However, a wet spring can lead to problems with brown rot. Myclobutanil (Immunox, Fertilome F-Stop Lawn and Garden Spray) or Captan will give good protection. Cherry fruit fly may attack the cherries with the maggot causing damage to the fruit. Malathion (check label), Bonide Fruit Tree & Plant Guard or Sevin can be used for control.

Pears: Pears are often able to escape damage without spraying. If trouble does arise, use the same recommendations given for apples.

Apples: Apples are the crop most in need of a spray schedule. Unless you have disease-resistant trees, cedar-apple rust is a perennial problem. The larvae of the codling moth is the insect most likely to damage fruit. Control can be a challenge due to changing labels and an extended spray season. See our article in our March 26, 2019 newsletter on "Apple Tree Sprays" for details (https://bit.ly/2Vla9vT).

We have three new publications that give an overview of fruit pest control that are helpful.

- Spray Schedules for Growing Apples at Home (https://bit.ly/2UwS35u)
- Spray Schedules for Growing Stone Fruit at Home (https://bit.ly/2IA7uZq)
- Fruit Pesticides, Active Ingredients, and Labeled Fruits (https://bit.ly/2Zpmm1Q)

Don't overlook the "Fruit Pesticides..." pub as it lists trade names as well as other very important information.

Anticipating the Japanese Beetle
I've been getting questions already about Japanese Beetle control for the coming year. At this point, there's not much you can do – the beetles are still in the grub stage underground. Eliminating them won't prevent adults from flying in, though you might slow down the 'invasion' on your plants.

As adults start to hit, keep in mind that once they find something to eat, they release pheromones that attract others to that same plant or type of plant. Preventing them from getting access to your most precious plants and eating something else instead may divert the worst of the damage. Putting netting over smaller bushes or gardens is a possibility. Going out early in the day and hosing down trees will knock beetles off for a time. More drastic measures include chemical sprays, though these are also harmful to beneficial insects. Try and spray before bees are active during the day, and be as sparing as possible.

Pheromone traps are often too effective in drawing insects to them. However, if you're surrounded by crop fields (which are quite attractive to Japanese

beetles), a trap or two on the corners of your property **may** help when the insects come to chew on corn silks or soybean flowers. If you can, do what a good friend of mine did and hang the plastic part of the trap over a chicken coop – the beetles will fall in and become a tasty treat for the birds.

Fields after the Floods

As the water recedes from cropfields following the flooding in March, we can start working towards 'normal' again. Even though crops were not present in the fields affected, damage has been done and some steps can be taken to mitigate the damage.

First and most obvious are the deposits of sand, metal, brush, and other 'junk' on the fields. While tillage is many times detrimental to soil health and structure, in the case of sand deposits it may be necessary. While exceptionally deep sand piles may warrant removal, smaller deposits (8-24 in deep according to work from Iowa State) can be spread across a field or removed. Piles smaller than that can be plowed in to twice the sand depth.

Less visible is what some experts call the "post flood syndrome," similar to fallow syndrome. Changes to soil structure, aggregate stability, nutrient content or availability, and biology warrant special treatment following a flood. Soil testing should be done, as soil pH may be altered and N and P may have washed downstream. In addition, some P will convert to less plant-available forms when oxygen is absent; it will take time for the reverse reaction to occur. Also keep in mind that the soil is essentially compacted, and K deficiency is more likely. Additional starter P and K may be required. Wait long enough after the waters have receded to allow these reactions to start occurring.

Extensive flooding can damage the soil's population of arbuscular mycorrhizal fungi (AMF), who contribute to the health and 'living network' of the soil. These are the fungi that make up much of the soil food web, contributing to nutrient uptake of crops by assisting in obtaining nutrients. These fungi rely on the presence of roots to function; if fields are not planted at all and no new roots grow for a year, their populations will be further reduced.

Past experience suggests that crop yields are likely to be below average in the season (or two) following severe floods. Between time and money restrictions, planting a cover crop may be the most prudent action. This way, living roots are still present in the soil to 'restart' the soil food web; cover crops may be flown on instead of drilled if fields are still damp or inaccessible for other reasons. A good cover crop is still relatively inexpensive, and there are many cost-share opportunities available. The cover crop can also be terminated and lightly disked or tilled to provide organic matter, further improving soils challenged by sand and saturation.

Other resources:

- University of Nebraska-Lincoln: Farming After the Flood. https://flood.unl.edu/crops
- Iowa State University: Management Considerations for Post Flooding Soils https://bit.ly/2W6zs28
- Successful Farming: Farming After a Flood https://bit.ly/2Zryj7c

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2017 Census of Agriculture

The data and findings from the most recent Census of Agriculture were released recently. The information may be accessed at https://www.nass.usda.gov/AgCensus, and a variety of tools are available to help you find and sort data. I enjoy the state- and county-specific results; from the above webpage, click on "State and County" on the left hand side under "Find current data by…" From there, select "County" for a set of pre-selected reports, or select the Quick Stats option further down the page to pick and choose exactly which pieces of information you want to see.

Many of the pre-generated reports compare survey findings from 2017 with 2012, the next most recent census. There are a few interesting differences between the two.

- There were 430 farms from Doniphan county that participated in the 2017 census. The farms averaged 413 acres each with an average value of $3431/ac. Compared to 2012, there are 8 more farms reported, but average farm size decreased by 12 ac.
- The average **net** cash farm income was $57,906. This is much lower than the 2012 average of $69,195. Fewer farms had net gains in 2017 than in 2012.

- Corn harvest was similar between 2012 and 2017, but many more soybeans were harvested in 2017 compared to 2012.
- Many more acres were treated with fertilizer and lime in 2017 compared to 2012, though less pasture was treated. Acres sprayed to control insects nearly doubled, and those treated for nematodes more than doubled.
- The acres under conservation easement was less in 2017 than 2012 (10,000 ac compared to 13,000 ac in 2012). No-till prevalence increased from 98,871 ac to 110,992 ac; a similar trend was observed for reduced or minimum till. Cover cropping increased from 745 ac to 3400, which is a wonderful number as far as I am concerned!
- About 2/3 of all producers (individuals involved in the farm operation) are male. Less than half of all producers (42%) said farming was their primary occupation. The vast majority of producers have been farming for more than 11 years.
- There are more farmers age 75 or older, than there are under 35 years (13,030 vs 8595). There are more farmers age 75 or older than there are in the 35-44 year age group (10,576). There were only 146 new or beginning producers in 2017, and of these only 96 were the principal producer on the farm.

Calving Challenges 2019

It's honestly felt like insult on top of injury. Years of low grain prices and high input costs for the crop folks, and then droughts and rough winters for the livestock guys. I've talked to many farmers in Doniphan county and beyond who have reported far greater-than-normal rates of stillborn calves, dead calves, scours, and more. While some of these losses are probably merely due to weather at the time of calving, there might be some underlying issues that are under a farmer's control.

K-State veterinarians and beef cattle specialists say they've been seeing a number of calf deaths caused by infections, toxins, and nutritional issues, not just weather. Many of the stillborns and weak calves they've done testing or further investigation on have been due to maternal vitamin A and/or selenium and/or protein deficiency. Even cows fed mineral with appropriate levels of the micronutrients nutrients have had deficient calves; the vets aren't sure why, but suspect degradation in the mineral due to improper storage or weathering.

Particularly because forage has been in short supply, producers may be purchasing lower-quality hay just to get by. I know I sure have. Properly-balanced and formulated minerals are going to be essential to keep calves healthy and growing, and to help cows sustain their calves and regain condition this spring and summer to successfully breed again.

Be sure your herds have access to minerals, and not simply salt blocks – consider investing in more weather-resistant mineral solutions, putting out enough feeders that cattle always have one handy, and so on. If you suspect you had deficient calves this year, consider testing forage before next winter to determine if specific microminerals are in short supply.

One Step Towards Better Roads

It's no secret that many of the roads in the county – gravel, paved, or dirt – require annual patching, mending, or grading. Much of this is them simply being used, but water is often a major contributor to damage. Some of this is simply from rain running off the road, but some is from adjacent field runoff. For about a year now, the Doniphan County Road and Bridge RCPP (Regional Conservation Partnership Program) has been targeting roads in the second category. This innovative program partners conservation funding (via EQIP) with local support (from the county roads and bridge department) to repair and improve areas of crop fields that affect nearby roads.

While the funding comes through NRCS EQIP funds, the 'rules' are a bit different. EQIP usually requires an entire field to be enrolled in conservation work, but the RCPP project targets just a specific area of the field to get the desired result.

If you have (or know of) fields with runoff or erosion that are affecting roads nearby, the RCPP may be able to help with both cost-share funding and labor, machinery, and equipment. Contact Chris Griffin at the Conservation District: 785-985-2221 ext 3.