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ORCHARD NOTES

July 1998

This Issue Contains:

Crop Loss Information
Training Newly Planted Walnut Trees
Leaf Analysis
Critical Nutrient Levels Table
Mesophyll Collapse in Walnuts
Pest and Disease Updates
Off Type Chandlers
Critical Nutrient Levels

HELP AVAILABLE FOR ORCHARD LOSSES

From Farm Service Agency, June 1998 Sutter/Yuba FSA News

The Sutter/Yuba Farm Service Agency (FSA) has a few programs that could possibly assist you for crop losses resulting from all the unseasonable rain.

The Noninsured Assistance Program (NAP) provides crop loss protection for many crops for which Federal Crop Insurance is not available.

To be eligible for benefits there must be at least a 35% crop loss for the affected crop and area. An eligible area consists of either a geographical area consisting of 320,000 acres or acreage on which the value of all crops exceeds 80 million.

After the loss and area has been determined, then the producer's crop loss must exceed 50% of his/her approved yield or the producer was prevented from planting the applicable crop.

Most importantly, producers have the requirement to file an acreage and production report prior to the crop reporting date and

report the crop damage within 15 days after the disaster occurrence or date damage to the crop was apparent. Benefits are available to eligible producers whose loss is in excess of 50% of the approved yield at a 60% price level. Payments to any one producer cannot exceed $100,000.

The Tree Assistance Program (TAP) provides cost-share assistance to orchard and vineyard growers who replant or rehabilitate their trees which were lost as a result of damaging weather.

Although a 1998 TAP program has not officially been approved yet, we believe the program will operate much like the 1997 program did. The rules for the 1997 TAP program are explained below.

FSA defines an eligible grower as one who does not own more than 500 acres of the type of tree or vine assistance is being requested on, earned less than $2.5 million gross annual revenue in 1997, suffered a 20% or greater loss and is in compliance with wetland conservation provisions. Eligible owners may not receive more than $25,000.

An official sign-up has not been announced, however, growers who lost eligible trees to damaging weather should contact the FSA office immediately, so a field visit can be scheduled.

The **Emergency Farm Loan** program allows producers to apply for loans to help cover part of their actual losses when an emergency declaration has been made. A Presidential emergency declaration was made on February 9, 1998.

Emergency loan applications are being accepted through October 9, 1998. To be eligible, farmers must have suffered a 30% loss of their normal production from causes related to the disaster declaration, be able to repay the loan and any other loans, be unable to obtain credit elsewhere, have adequate security and have multi-peril crop insurance, if available. Loans may be made to replant trees lost. (Up to $500,000 at 3 :%). For these emergency programs contact your local FSA at 671-0850.

Remember, FSA no longer sells or services catastrophic crop insurance, so please contact your private insurance agent to report losses, etc.

From Sutter Yuba Cooperative Extension

Calculating Losses of Individual Orchard Trees

When fruit or nut trees die of unnatural causes, such as from flooding or storm damage, it can be difficult to estimate future dollars lost from that tree. The grower has lost net income from the time the tree was destroyed or damaged to when a new tree is planted and comes into production with the same yield, fruit size and quality as the tree that was lost. We have specific information on the value of an individual tree for walnut, prune, peach, almond and kiwi that takes many factors into consideration. Spacing, tree age and yield can also be tailored to your orchard using a computer program, also available from our office on Garden Hwy. Bring in a disk to our office and we will copy the program for you.

MESOPHYLL COLLAPSE IN WALNUT

Around the last week of May, there were many calls from walnut growers concerned about the curled walnut leaves with dead, brown tissue between the veins, especially on Hartley. Affected leaves eventually fall off. We call this problem Mesophyll collapse. This is a physiological problem associated with sudden temperature changes which we've had our share of this spring. The problem may have to do with transpiration and it may occur on leaves that are mildly zinc deficient - Chlorotic spots become necrotic and then coalesce causing leaves to twist. Where this was a problem, I encourage you to check the leaves for zinc levels in July. They could be low in this nutrient.

LEAF ANALYSIS

Leaf analyses will help you assess the nutritional status of your trees and provide information to guide your fertilization program. Take leaf samples in July except for pistachio which should be sampled in August. The elements of most concern in our area are nitrogen, potassium and zinc. Any other suspected deficiencies or toxicities should also be checked at this time. Each sample should represent trees of the same variety, age and rootstock, growing on similar soils. If there are problem spots or certain trees that are doing poorly, take a comparison sample between the poor vs. good trees to help pinpoint the problem of poor growth. Leaf sampling techniques vary depending on the crop as follows:

Walnut - select 25-30 terminal leaflets from spurs or from the middle of moderately growing shoots.

Peach - select 60-80 basal to mid-shoot leaves.

Apple - select 60-80 fully expanded, mature leaves from non-fruiting spurs.

Kiwifruit - select 25-30 mature leaves, just past the fruit on the shoot. Large blocks can be sampled by taking one leaf each from randomly selected representative trees or vines. Place leaves in paper bags and keep them cool until they are delivered to the lab. Inform the lab if zinc foliar sprays were used since surface zinc must be removed by special washes to more accurately measure the leaf content of zinc. For kiwifruit, we recommend keeping leaf nitrogen at 2.5% or lower to maximize storage potential. A list of laboratories that do leaf, water and soil analyses is available from our office.

CRITICAL NUTRIENT LEVELS

	Cling Peach	**Apple**	**Walnut**	**Pistachio**	**Kiwifruit**
% Nitrogen (N) Def. Below Adequate	2.4 2.6-3.5[(1)]	1.9 2.0-2.4	2.3 2.4-3.2	2.3 2.5-2.9	1.6 2.2-2.8
% Potassium (K)[(2)] Def. Below Adequate over	1.0 1.2	1.0 1.2	0.9 1.2	1.0 1.0-2.0	1.0 1.5
% Magnesium (Mg) Adequate over	0.25	0.25	0.3	0.6	0.3
%Calcium (Ca) Adequate over	1.0	1.0	1.0	1.3	2.0

%PPM zinc (Zn) Adequate over	20	18	18	10	15
%Chloride (C1)[3] Excess over	0.3	0.3	0.3	(?)	1.1
%Sodium (Na)[3] Excess over	0.2	--	0.1	(?)	(?)

Based on July leaf samples except pistachio (August samples). Adequate levels for all orchard crops: Phosphorus (P) 0.1-0.3%; Copper (Cu), over 4 ppm; Manganese (Mn), over 20 ppm.

[1]Best to keep around 3.0%
[2]K levels between deficient and adequate are considered >low= and may cause reduced fruit sizes in some years.
[3]Excess Na or C1 cause reduced growth at the levels shown, leaf burn may or may not occur when levels are higher. Confirm salinity problem with soil or root samples.

TRAINING NEWLY PLANTED WALNUT TREES

For walnuts, it is critical to spend time the first season properly developing the tree trunk. Throughout the summer, encourage all growth into one main shoot that will form the trunk of the tree. Tie it loosely to the stake as it grows. Pinch or prune back the growing tips of competing shoots. Young trees do best with frequent, lighter irrigations ensuring adequate but not excessive moisture.

PEST and DISEASE UPDATES

Check the pest tracker in our office for the latest update on insect activity or get on the e-mail pest tracker.

Walnuts--

Blight - There is very little blight where most or all copper sprays were tank mixed with Manex and applied by ground whether on

early or later leafing varieties. Orchards where sprays were applied by air or used less Manex have more blight damage.

Codling Moth - Change pheromone trap bottoms and lures and watch for the beginning of the second flight to occur in early July. Table 1. from the UCIPM Walnut Pest Management Guidelines is a quick reference to help you time Codling Moth sprays. The guidelines are available from our office or the internet at www.ipm.ucdavis.edu.

Walnut Husk Fly - Hang husk fly traps supercharged with ammonium carbonate by July 1. Check out the husk fly video from our office for monitoring and spray timing guidelines.

Peaches--

Continue to monitor for Oriental Fruit Moth (OFM) and Peach Twig Borer (PTB) with pheromone traps until harvest.

OFM - Look for the 3rd flight to start in early July. Once moths are caught, reset the biofix and spray at 500-600 degree-days (DD)or 400-500 DD if fruit are ripening.

PTB - Look for the 2nd biofix to occur in early July. Spray at 400-500 DD from the biofix or at 300 DD when fruit is ripening.

Cling Peach Rust - I have seen rust symptoms on leaves on several different varieties in some orchards. Full coverage sulfur sprays applied every 7-10 days this season were the key to keeping this disease in check. If rain is predicted before harvest, spray again to prevent fruit infections. Fruit infections occur as the fruit begin to mature. The infected areas appear water-soaked and become green spots. The tissue becomes sunken and the margin remains green. Later, uredinospores may develop in fruit lesions.

Peaches and Apples--

Leafroller - Last year there was quite a bit of leafroller damage on fruit in peaches. We've been monitoring for leafroller worms all spring in apples, peaches and prunes. Most of the worms we have found are oblique banded leafroller (OBLR).

We expect a second generation of OBLR to start anytime and we have already found a larva in a prune orchard. When we start finding leafroller in peaches it will be posted on the pest tracker in our office and other industry people will be contacted. When we

find leafroller it is time for you to check your own orchard and be prepared to spray if worms are found.

OFF TYPE CHANDLERS

Like 1995, this year is an "off" production year for off type Chandlers. For growers with non-producing trees in 1995 that were marked and not top worked, check those trees out. Probably only a few nuts will be remaining. The drop occurs later than the typical pistillate flower abscission (PFA) drop, but earlier than nut drop due to insufficient pollen. This year the nutlet drop happened somewhere around May 25th.

This problem is a genetic disorder of Chandlers that happens sporadically. When the problem occurs, it happens on the same trees. Usually only a few trees in a given orchard are affected, but there are exceptions. It can be spread by using affected graft wood. Off-type trees are usually more vigorous than average. From a study we've been conducting in Rio Oso since 1995, normal trees yielded 164 lbs/tree more than off type trees in 1995. In 1996 and 1997 respectively, off type trees which had larger trunks, yielded 39 lbs/tree and 42 lbs/tree more than normal trees. At this rate, off type trees would need to yield higher than normal trees for four consecutive years to offset the "bad" years. We are short two years.

We cannot predict when there will be an off year. One similarity between 1995 and 1998 is that both springs were cool and wet. To deal with this problem, there are really only two options available. The first is to top work affected trees to normal Chandler. The other option is to just "live with it". Compare the cost of topworking for your age tree vs. the economics of "living with it" above. If you notice non-bearing Chandlers this year for the first time, please give me a call.

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