



Garfield County Agriculture Newsletter



Fall Edition 2007

Area Pine Trees Should be Monitored

In the very short amount of time that I have been the Garfield County Cooperative Extension Educator for Agriculture, the overwhelming concern for pine trees located in the Enid area, as well as across the county, have quite easily topped the list of inquiries received here in the Extension Center.

Pine trees that began this past spring and summer with seemingly little or no signs of having health problems are now suffering from splotchy browning of blighted stems and needles and in some worse cases, even rapid tree death.

Three primary conditions that affect pine trees can cause the symptoms that are being noted by homeowners and concerned neighbors regarding pines. The first is damage that may have been caused by the Pine Tip Moth. New growth of pines (the tip of the branch) is killed when the moth larvae enter into the pine shoots. The damage from the pine tip moth may resemble the second condition affecting pines in the area called Diplodia tip blight. Pine tip moth damage can be identified by the presence of the larva in the dead tip or a hollow tip where the insect had been. Most 2 and 3 needle pines can be affected but slash, Austrian, and long leaf pines are not usually severely affected.

Diplodia tip blight is the fungal disease that can seriously attack pine seedlings and in older trees may cause dieback of branches. Growth from blighted terminals is usually stunted, the needles turn brown, and the terminal buds exude an excessive amount of resin. Cones of older trees can also be affected where the minute black fruiting bodies of the Diplodia fungus can be seen on the scales of the pine cones. The extra sap associated with Diplodia tip blight is a major difference for pine tip moth damage where the terminal bud will be hollow with no sap emerging. Pine tip moth damage begins to show up in the summer months of May through September, Diplodia fungus may be observed any-

time during the year. An insecticide labeled for pine tip moth may be applied to pine trees through multiple applications from April through September, while a fungicide applied for Diplodia tip blight should be applied in April and May.

The third and most severe of the challenges pine trees have faced this year is a devastating disease called Pine Wilt. In the late 70's, pine wilt was confirmed in Columbia, Missouri and has since spread throughout most of the Midwest including much of Oklahoma. Scots or Scotch pines seem to be the most susceptible but other varieties including Austrian, Mugho, and Japanese Black are beginning to be diagnosed as having pine wilt disease. Slash and White pine seem to be somewhat resistant. Trees affected by pine wilt are usually older than seven years and usually 10 to 15 years and older.

Pine Wilt is caused by the pinewood nematode. These microscopic-sized, worm-like animals feed on the living plant cells surrounding the resin canals, or water-conducting passages, of pines. They also feed on the blue-stain fungi that live in the wood of dead and dying pines.

Nematodes are unable to move very far without the help of an insect vector. The life cycle of the pine sawyer beetle (longhorned beetle) is closely intertwined to the pinewood nematode. Female pine sawyer beetle lay their eggs under the bark of dead or dying pines, during the summer. The grubs hatch and complete their life-cycle and emerge the next spring as an adult pine sawyer beetle. Before the new beetle emerges, large numbers of the pinewood nematodes move into the breathing tubes of the new adult beetle. When the sawyer beetle tunnels to the surface and flies away, it carries up to 100,000 of "hitchhiking nematodes".

Pine sawyer beetles are strong fliers and can travel several miles. In order to mature and breed,

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BE ON THE WATCH FOR FALL ARMYWORMS IN PASTURES AND WHEAT

Fall armyworms are caterpillars that directly damage sorghum heads, fescue and Bermuda-grass pastures, seedling wheat, soybean and residential lawns. We have received reports of fall armyworm buildups in north eastern Texas and south central Oklahoma. In addition, I have seen some very severe fall armyworm infestations in numerous sorghum fields in Oklahoma over the past 3-4 weeks. For the most part, these fall armyworms have just about completed their lifecycle, but such large and noticeable numbers increase the potential that we will see another generation that could cause some serious problems for grass pastures, seedling wheat and lawns.

Female fall armyworm moths lay eggs at night on grasses or other plants that hatch a few days after being laid. One female can lay up to 1000 eggs. Caterpillars grow through six molts before becoming mature, increasing in size after each molt. Mature fall armyworms measure 1½ inches long with a body color that ranges from green, to brown to black and have a prominent inverted white "y" on their head. However, you need to detect them long before they reach mature size.

Small larvae do not eat through the leaf tissue, but instead, scrape off all of the green tissue and

leave a clear membrane that gives the leaf a "window pane" appearance. Larger larvae feed voraciously and can completely consume leaf tissue.

To scout for fall armyworm, examine plants in several locations within the field or pasture. Examine plants along the field margin as well as in the interior. Look for "window paned" leaves and count all sizes of larvae. I suggest a treatment threshold in seedling wheat is two or three ½ inch-long larvae per linear foot in wheat and three or four ½ inch-long larvae per square foot in pasture. Dr. Kathy Flanders of Auburn University suggests bending a wire coat hanger into a hoop. The hoop covers about 2/3 of a square foot, so a threshold in pasture would be an average of two or three ½ inch-long larvae per hoop sample.

It is crucial that you target smaller caterpillars (1/2 inches or less) for control for two reasons. First, the caterpillars don't cause really severe damage until they reach an inch long, and secondly, smaller caterpillars are much more susceptible to insecticide control than larger caterpillars. Let's hope that fall armyworm problems don't rear their ugly heads with the inverted "Y", but keep vigilant just in case. In any case, we will not be out of the woods for a fall armyworm outbreak until we get a good killing frost.

Insecticides labeled for fall armyworm control in pastures

Insecticide formulation	Rate of Product/Acre	Comments
<i>Bacillus thuringiensis</i> Biobit (11B1, B2) Javelin WG (11B1, B2) Xen Tari (11B1, B2)	0.5—2 lb 0.25—1.5 lb 0.5—2 lb	Use higher rate for heavy infestations or when plant growth is rapid. A contact insecticide may be added for enhanced control of heavy populations. 0 day waiting period for grazing or harvesting.
Baythroid 2 (3)	(Awaiting reg.)	
Confirm 2F (18)	8 fl oz	0 day waiting period for grazing or harvesting
Lannate (1A)	0.75—3 pt	For Bermudagrass pasture ONLY. 7 day waiting period for grazing, 3 day waiting period for harvest.
Malathion 5EC (1B)	2 pt	0 day waiting period for grazing or harvesting.
Methyl parathion 4E (1B)	1.5 pt	Remove livestock when spraying; 15 day waiting period for grazing or harvesting.
Sevin 80S (1A) Sevin 80 WSP (1A) Sevin 4F (1A) Sevin XLR Plus (1QA)	1.25—1.875 lb 1.25—1/875 lb 2-3 pt 2-3 pt	For improved pasture only; do not apply more than 2 applications pre-season and not more than once every 14 days. Sevin label states a 14 day waiting period for grazing or harvesting.

Wheat Pasture Grazing Prospects, Fall 2007

By Derrell S. Peel

As wheat producers struggle to get wheat crops established this fall, many are considering the prospects for grazing stocker cattle on wheat this winter. The continued high feedlot cost of gain makes forage based stocker gain more attractive and this is evident in the projected grazing budgets this fall. A stocker budget with typical assumptions is summarized below:

Winter Grazing, Early November – Early March

- Purchase 450 pound steers @ \$134/cwt.
- Gain 2 lbs./day for \$0.40/lb. of gain
- 2 % death loss, \$12/head Vet/Med
- \$4.50/head/month other costs
- 10 % Interest, \$15/head marketing
- Sell 688 pound steers after 119 days
- Selling Breakeven \$112.69

At the current time, March Feeder Futures are trading at about \$112.00/cwt. The March basis for a 688 pound steer is estimated conservatively at \$3.50/cwt, which means that it is possible to hedge a 688 pound steer now for sale in March at \$115.50/cwt.

The hedge price compared to the selling breakeven implies a return to the cattle of \$2.81/cwt. or 19.33/head. For the wheat producer grazing owned wheat, the budget is also providing a return of \$0.40/ pound of gain to the wheat, which is an additional \$95.20/head. Thus the total return to cattle and wheat is \$114.53/head.

Since some additional wheat production expense should be charged against the grazing enterprise to

cover the additional seed, fertilizer and other wheat production costs for grazing, the producer may want to look at the grazing activity on a per acre basis rather than per head. Assuming a stocking rate of 1.6 acres per steer (roughly 280 pounds of liveweight per acre), the wheat pasture returns above are equal to \$59.50/acre and the total return to cattle and wheat pasture is \$71.58/acre. These returns should be evaluated against the additional wheat production costs and potential yield losses associated with grazing.

The budget above also includes a labor charge for animal care so the producer providing all the labor for stocker production is also paying himself about \$12.00/head (or \$7.50/acre) in labor returns in this budget.

The projected returns in this budget are based on hedging March Feeder cattle at current futures prices. If a producer does not actually hedge the cattle, there is risk that the feeder cattle market in March will not be at the levels projected in this budget. There is a significant risk of another corn price shock to feeder cattle markets in the spring. If it happens, it may not last very long, but the timing may be critical given the need to remove wheat pasture cattle at first hollow stem. The market today offers an opportunity to significantly reduce this risk by forward pricing the cattle with a futures hedge or perhaps by forward cash contracts with feedlots. Producers are advised to consider risk management needs as well as return potential when evaluating wheat pasture grazing prospects this fall.

Insecticides labeled for fall armyworm control in wheat

Insecticide Formulation	Rate of Product/Acre	Comments
Baythoid 2 (3)	1.8 to 2.4 fl oz	7 day waiting period for grazing; 30 days for harvest
Karate w Zeon (3) Warrior w Zeon (3)	1.28 to 1.92 fl oz 2.56 to 3.84 fl oz	Wheat, wheat hay, triticale. 7 day waiting period for grazing and 30 day waiting period for harvest. Do not apply more than 0.06 lb ai./season.
Lannate LV (1A) Lannate SP (1A)	0.75 to 1.5 pt 0.25 to 0.5 lb	10 day waiting period for grazing, 7 day waiting period for harvest.
Lorsban 4E (1B) (Warhawk, Whirlwind)	1 pt	14 day waiting period for grazing, 7 day waiting period for harvest.
Methyl parathion 4E (1B)	1.5 pt	15 day waiting period for grazing or harvest. Temperatures should be above 50° F for application.
Mustang MAX (3)	3.2 to 4.0 fl oz	14 day waiting period for grazing or harvesting.
Proaxis 0.5 CS (3) Prolex 1.25 CS (3)	2.56 to 3.84 fl oz 1.02 to 1.54 fl oz	Wheat, wheat hay, triticale, 30 day waiting period for grazing or harvest.
Sevin XLR (1A)	1 to 1.5 qt	21 day waiting period for harvest, apply when temperatures are expected to exceed 55° F.
Tracer (5)	1.5 to 3 fl oz	14 day waiting period for grazing, 21 day waiting period for harvest.

Starting Cool Season Stockers

Dave Sparks, DVM

As the days get shorter and the weather cools off, it is time for many of you to start thinking about buying and starting stocker calves for cool season grasses and wheat pasture. Although wheat grazing may be down this year due to high grain prices, we have had a great year for grass, and there should be lots of cool season pasture available. Proper processing and starting can eliminate a lot of health problems before they strike.

Everyone has a favorite vaccination program, but remember that vaccines don't eliminate infections; they help the body's immune system to deal with them. It is probably not as important which vaccine products you use as it is how well the calves are able to respond. Several things can decrease the animal's ability to respond to the vaccines you invest in. Animals must be on a good nutritional status. Protein and trace minerals are especially important. When buying calves, the thin calves may look good from a pay weight standpoint, but if they are not immunologically competent you may be buying trouble. Cattle coming off of a long haul will need to rest and recover from the stress before they are processed. Provide good food and water to allow them to replace the shrink and dehydration. A good rule of thumb is to allow them to rest one hour for each hour they were on the road from the time they left their previous home until they are in your care. Young calves may not have their immunological system developed enough to respond well to vaccines. These calves may need to be revaccinated later to get a good response.

Consider buying calves that are weaned or preconditioned. Calves that are right off the cow can't respond well to vaccines because of the stress of

weaning. Always remember that anything that causes stress, depresses the immune response. In addition, calves that are not accustomed to eating supplemental feed will not be able to maintain a good nutritional status during the conditioning period. It typically takes at least 10 to 14 days for the calf to develop protection from the vaccines you give. If he is exposed to pathogens at the sale barn, he may have serious health problems before this protection can develop. Calves that have been given vaccines before they are weaned, shipped and exposed should have a degree of protection in place when they need it. Preconditioned calves can look awfully high priced when you are buying calves, but a lot cheaper after you have had a big drug bill or heavy death loss.

Once you get the calves home and into your starting lots, remember that a thermometer is the best friend you can have. Calves that are developing respiratory disease will show elevated temperatures 24 to 48 hours before they show obvious outward signs. Since early detection and treatment is the biggest factor in quick recoveries and decreased chronics, this time difference can be crucial. Pull and "temp" calves as soon as you suspect a decrease in appetite or activity. Remember to "if in doubt, check it out". If you are pulling a few calves that prove to have normal temperatures, you are probably getting all or most of the ones that should be treated.

Today we have several good antibiotics and anti-inflammatory drugs that are very effective in treating respiratory disease, but they all have in common that they are expensive. In this case an ounce of prevention is truly worth a pound of cure.

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the beetles need to breed on healthy pine trees. This feeding does little damage to the tree, but the feeding wound creates an entry point for nematodes to enter the tree.

During warm periods the nematodes can multiply rapidly and spread throughout the tree, as they feed the resin tubes are destroyed and water movement slows, then stops. At this time the wilt symptoms develop and the tree dies. Scattered branches on a tree may be affected initially, but the problem soon spreads to the remaining branches. In other situations, however, the entire tree turns brown at once. These symptoms usually become very apparent in late summer and early fall, August through

September.

Insecticides and nematicides have so far proved to be ineffective. The best management practices today are very similar to what they were when the disease was first discovered. Containment of the disease through sanitation is critical to protecting susceptible varieties. Dead pine trees can become beetle reservoirs, so they should be burned, buried or chipped. If you spot dead trees in the fall, you can wait until early spring to remove them because the beetles will not emerge until the weather warms in the spring. Avoid saving the wood from wilt-killed pines as firewood as the beetles can continue to emerge from the logs.

Interval Feeding of Protein Supplement to Cows on Range

Glenn Selk

Dry, pregnant beef cows grazing low quality warm season pastures in late summer, fall, and early winter are usually supplemented with high protein supplements. It would be desirable to feed the supplement at less frequent intervals (than daily) to reduce labor and equipment costs. A study done at OSU in the 1990's has indicated that cows fed the same amount of total 40% crude protein supplement either 3 or 6 days per week perform similarly.

Interestingly enough, similar research was reported almost 40 years ago with similar results. Below in table 1 are the results of the most recent experiment. Cows were fed 21 pounds of

protein cubes per week from November 17 until March 9. From March 10 to April 22, cows were fed 28 pounds of supplement and only 17.5 pounds per week from April 23 to May 15.

Cows were provided free choice grass hay when snow or ice covered the standing forage, or when the temperature was less than 40 degrees and raining, or was less than 25 degrees at noon. Cows were exposed to bulls for 75 days beginning May 17 and palpated for pregnancy 90 days after the breeding season. **In this trial, the cattle performance was virtually identical and was not affected by the interval at which the cows were fed the protein supplement.**

Table 1. Influence of supplementation on body weight, body condition score, and pregnancy rate of beef cows. (Wettemann and Lusby, 1994 OSU Animal Science Research Report)

Days supplement fed per week	3 days	6 days
Number of cows	62	61
Body weight in November	1186	1210
Weight loss to April (after calving)	242	255
Body condition in November	5.4	5.4
Body condition in April	4.4	4.3
Pregnancy rate	98%	94%

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COMMODITY REPORTS—PRODUCTION & PRICES REPORTS 9/15/06
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Crop	This week	2 Weeks Ago	Year Ago
Export Inspections			
Wheat (mil. Bu.)	9.637	21.786	16.345
Corn (mil. Bu.)	47.686	44.601	17.371
Soybeans (mil. Bu.)	9.870	12.235	5.198

Grain & Hay Currents—9/21/06				
Wheat-Medford	4.62	Gulf-5.49		
Milo-Medford	4.29	Gulf-6.05		
Soybeans-Medford	5.23	Gulf-6.24		
Corn-Ponca City	2.52	Gulf-3.15		
Cotton-Gr. 41, Leaf 4, Staple 34		47.25		
Alfalfa	Lg & small Square	\$140-\$170 per ton	Lg round	\$120-\$140 per ton
Grass	Small sq	\$80-\$100 per ton	Lg round	\$60-\$110 per ton

Livestock Market Data 9/15/06	This Week	Last Week	Year Ago
Hog Slaughter (1000 Hd)	2123	1884	2021
Cattle Slaughter (1000 Hd)	661	591	653
Steers (Midwest)	L-N/A H-N/A	L-N/A H-N/A	
Feeder Steers 5-6 cwt	L-123.00 H-136.50	L-123.00 H-138.50	
Hogs-Missouri	48.75	48.25	
Feeder Pigs 60-70 lbs.	L-N/A H-N/A	L-74.50 H-74.50	
Sheep-National Price per cwt	50-70# \$97-\$103	120-140# \$85-\$90	Ewes \$25-\$41

Sources: www.agebb.Missouri.edu/mkt/bull6c.htm
Www.ams.usda.gov/mnreports

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