The January 2016 Edition of

Nikki’s News

Marshall County’s Agriculture and Natural Resources Update

What’s Happening?

Marshall County’s First Annual Beef Conference, January 7th
Marshall County Extension Office

Marshall County Pesticide Training, January 21st
Marshall County Extension Office

Winter Ag Conference, February 2nd
Collaboration of many W. KY Counties, See page 2

Hay School, February 19th
Collaboration of Marshall, Livingston and Lyon Counties, See Page 3

Master Gardener Mini Conference, March 5th
Marshall County Extension Office

Marshall County’s First Annual Grain Growers Night Out, March 7th
Marshall County Extension Office

More details on these events and other local events can be found at http://marshall.ca.uky.edu/AgNaturalResources under Upcoming Events or at the Extension Office.
Crop News

Annual
Winter Ag Conference
February 2, 2016

LOWRY’S SHOP IN PILOT OAK
5183 St Rt. 94 W, Water Valley KY 42085

8:00 a.m.  Registration and Trade Show
9:00 a.m.  Presentations
  • Fertilization Options - Edwin Ritchey - UK Soil Specialist
  • Subsurface Drainage - George Goodwin - ADS Pipe
11:00 a.m. Lunch catered by Southern Red’s
12:00 p.m. Presentation
  • Cover Crops - Steve Blanford - NRCS
1:00 p.m.  Door Prizes/Closing Comments

Donuts and Coffee available
Sponsored lunch will be provided
CCA CEUs (applied for)
KY & TN Pesticide CEUs (applied for)

For more information call your County Extension Office!
Calloway .......... 270-753-1452
Carlisle .......... 270-628-5458
Fulton ............. 270-236-2351
Graves ............ 270-247-2334
Hickman .......... 270-653-2231
Marshall .......... 270-527-3285
McCracken .......... 270-554-9520

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Hay News

Hay School
Friday, February 19
Kentucky Dam Village,
Village Green Room across from the Golf Course
9:00 a.m. to 3:00 p.m.

Topics:

9:10 – 10:00   Managing Hay Production Costs
   – Greg Halich, UK Ag Economist

10:00 – 10:50   Hay and Baleage Harvest and Storage Systems
   – Ray Smith, UK Forage Specialist

11:00 – 12:00   Hay Sampling, Analysis and Kentucky Data
   – Sally Flis, Feed and Crops Support Specialist, Dairy
     One Analytical Services, Ithaca, New York

12:00 – 1:00   Lunch

1:00 – 1:30   Hay Fertility Management
   – Edwin Ritchey, UK Soils Specialist

1:30 – 2:15   Livestock and Hay Nutrition
   – Roy Burris, UK Beef Nutritionist

2:15 – 3:00   Forages for Western Kentucky

Cost $10 per person. Minimum of 20 to hold the class—register early!
Livingston County Extension Office—270-928-2168
Lyon County Extension Office—270-388-2341
Marshall County Extension Office—(270) 527-3285

Disabilities accommodated with prior notification.
“Neonatal” calf diarrhea is defined as scours when it occurs within the first three weeks of a calf’s life. Bacteria, viruses and parasites can attack the lining of the calf’s intestine and cause diarrhea. The decrease in absorption of essential nutrients from milk leads to weight loss and dehydration. If the disease level is severe, calves often die, but even calves that survive will perform poorly for the remainder of their lives when compared to healthy calves.

Preventing calf scours involves going beyond the immune system of a newborn calf. Excellent cow nutrition during and after gestation, an easy calving process, and environmental management factors all contribute to a successful start. On the flip side, an inadequate quantity and/or quality of colostrum, difficulty calving, poor sanitation, cold, wet weather and overcrowding in calving areas all contribute to a higher risk of disease.

A good scours vaccine program in the cow herd is an important first step. Rotavirus, coronavirus, bacteria (K99 E. coli; Clostridium perfringens Type C, Salmonella spp.) and the parasite Cryptosporidium are the most common causes of neonatal calf diarrhea. Controlling rotavirus, coronavirus and E. coli with vaccines can help you significantly reduce or eliminate sickness and death losses due to calf scours. Most beef cows produce adequate colostrum, but sometimes they do not produce the correct antibodies to fight the specific bugs that cause diarrhea. Scours vaccines are formulated to be given to pregnant cows and heifers late in gestation, so they will make the correct antibodies as colostrum is being formed.

A first or primary dose followed by a booster dose is required the first year you use a scours vaccine. After that, just one annual revaccination is required. Product selection often depends on when you plan to work cattle; generally Scour Bos is administered earlier in pregnancy, followed by Guardian and then ScourGuar, which is given late in gestation. If the cow herd has not been vaccinated and calf scours develop, there are oral vaccines available to give to newborn calves, prior to nursing, which can provide some immediate protection in the gut.

Make sure newborn calves receive adequate colostrum within the first six hours after birth. Although colostrum can technically be absorbed up to 24 hours of age, the amount absorbed after 12 hours of life is considerably diminished.

Once the calf has received colostrum from the mother, it is essential to prevent the environmental load of pathogens or “bugs” from overwhelming the calf’s immune system. Generally, calf scour pathogens build up in the environment as the calving season progresses. Calving in the same area as older calves greatly increases the risk to the newborn calf, especially in wet or muddy conditions as we often see in the spring in Kentucky. If possible, rotate cows onto clean pastures while cow-calf pairs remain on the old pasture. Additionally, keep the calving area as clean and dry as possible. Even the best calving management will have
no effect if the first thing a calf ingests is manure from the calving area. The cows’ diet should provide adequate energy and protein. Calves born to energy deficient cows will have reduced amounts of brown fat, which supply energy for the calf to survive initially. Additionally, calves need adequate protein for vigor after birth. Weak calves cannot produce sufficient body heat and may be slow to stand and nurse. Remember up to 880 percent of fetal growth occurs in the last 50 days of gestation and cows should calve at a body condition score of 5 (heifers at BCS 6).

Calves that experiencing a difficult birth have a greater risk for subsequent disease, especially calf scours. Trauma associated with a difficult birth severely impacts the ability of that calf to nurse and absorb colostrum. It is important to provide these calves with colostrum quickly which usually means using an esophageal feeder rather than waiting for the calf to nurse on his own.

Even with prevention, you can have a scours outbreak. If this happens you need to reduce newborns’ exposure to infectious agents, separate healthy pairs from sick calves immediately and make sure equipment, boots and hands are thoroughly cleaned after handling sick animals. You’ll also need to move pregnant cows forward to a clean pasture, maintain clean pens and facilities, reduce stress on cows and calves and assist with calving early as necessary, especially with heifers. Keep animals as clean and dry as possible and provide windbreaks in cold weather. You need to have a good nutrition plan for cows and heifers and make sure calves start nursing as soon as possible after calving to get adequate colostrum (10 percent of the body weight in the first 24 hours with at least 2 quarts during the first 6 hours).
Deoxynivalenol (DON) is a vomitoxin produced by Fusarium graminearum, the causal agent of Fusarium head blight (FHB) of wheat. In most years, the visual symptoms of FHB (bleaching of grain heads) will foretell the presence of DON in harvested wheat grain. However, there are years, such as 2014, where DON levels were extraordinarily high without FHB symptoms observed during the growing season.

To better understand seasonal vomitoxin fluctuations an annual survey in Kentucky was initiated in 2015. A total of 40 samples were collected from 14 counties (Figure 1) and sent to the University of Minnesota and analyzed for DON using gas chromatography-mass spectrometry (GC-MS). Of the 40 samples submitted to the survey, 38 had less than 1.0 ppm DON concentrations and only one sample exceeded 2.0 ppm (Figure 2). The low DON levels were expected given the low incidence of FHB in 2015.

Twenty-four of the forty samples submitted were tested for DON prior to samples being sent to Minnesota for GC-MS analysis of DON. The DON levels were greater for the GC-MS lab results for 12 of the samples and the DON levels reported by the submitter were greater than the GC-MS results for the other half (Figure 3). Measuring DON is extremely variable due in part to the low detection levels (parts per million) and the inherent variability that exists in every grain sample. Therefore, different DON values for the same grain sample are not unexpected or alarming in most situations.

This survey is the first statewide compilation of wheat vomitoxin levels in Kentucky. To develop a better understanding of annual vomitoxin fluctuations additional collections are needed. The Kentucky Wheat Vomitoxin Survey will be completed again in 2016. It is essential to collect samples every year and not just years that FHB is apparent. It is also important to collect from all wheat-producing counties in Kentucky.

The 2016 Kentucky Wheat Vomitoxin Survey submission form will be posted in a later edition of Nikki’s News. There is no information requested that will allow identification of the source of the sample other than a unique code chosen by the submitter. The submitter will be the only one to know that code, which will be published in an annual report such as this one.

Figure 1: Counties that participated in the 2015 Kentucky Wheat Vomitoxin Survey: Marshall, Livingston, Crittenden, Lyon, Caldwell, Hopkins, Muhlenberg, Todd, Union, Daviess, McLean, Breckinridge, Taylor, and Casey.
Please submit samples to your local county agent in 2016.
As I write this article for December, there seems to be as much frustration among cattle producers as I have seen in years - not so much about the overall market, but how quickly things have changed. Less than 12 months ago, the cattle market was shrugging off all negative news. Now, it seems that anything that can be construed as negative sends the board limit-down and continues to feed the market pessimism that exists. In November, I focused my article on winter backgrounding prospects, which I typically do each fall. In October, I focused my article on the impact of increasing slaughter weights, which has been a factor in the recent downturn. This month, I want to focus on competing meats and the impact of international trade, as I think these factors are the most significant to understanding the 2015 beef market.

It might surprise many people that beef production will actually be lower in 2015 than it was in 2014. We are in still in the early stages of herd expansion and that process takes time. But, beef production was above 2014 levels for the 4th quarter, which is evidence that the trend is changing. At the same time, beef exports are projected down over 13% from 2014 (see graph below). It is also worth noting that beef imports are up significantly as well. Still, the impact on beef consumption per capita is relatively small for the current year. I think the real story has more to do with pork and poultry, than beef.

It is important to remember that 2014 was a good year for all species, so we are seeing growth in production of competing meats. Pork production is up over 7% with roughly a 3% increase in exports. Even more astounding, broiler production is up 4% in 2015, while broiler exports are down around 14%. Exports have been sluggish for several reasons including bans on US poultry from some countries due to Avian Influenza, sluggish economies, and a significant increase in the value of the US dollar. Regardless, the net effect is that there is significantly more pork and poultry on the domestic market. This combination has applied downward pressure to boxed beef prices, which are off 20% from last year. Of course, lower boxed beef prices are passed on to the fed cattle and feeder cattle markets.

As we look ahead to 2016, production increases are likely to be seen for all three major meats. Current USDA forecasts are for beef production to increase by more than 4% and pork and broiler production to increase by roughly 2%.

USDA is currently forecasting increases in export volumes across the board, likely due to an expectation of regaining access to some markets, lower price levels, and an assumption that the US dollar will not see another value increase of the magnitude seen in 2015. With production increases likely, the export trade picture will once again have a significant impact on prices.
Winter is for Witchhazel
Amy Aldenderfer, Hardin County Horticulture Extension Agent

The cold winter season is enough to keep many plants, and most gardeners, in a state of suspended animation patiently waiting for warm breezes and bright sunshine. But, among these droves of winter evaders, there is one with the fortitude to tempt ‘old man winter’ and produce not solely a plump bud or a greenish stem, but a flower with fragrance and style unlike any other blooming shrub. The plant is Witchhazel and it is the hero of a winter garden.

The name witchhazel has little to do with witches or hazels. The word “witch” is a derivative of the word “wyche” meaning pliable or flexible. During colonial America, the pliable forked branches of witchhazel made for favorite divining rods of dowsers searching for hidden water sources or precious metals.

There are five species of witchhazel - two native, two from Asia, and one hybrid. Most witchhazels used in landscapes are cultivars of the hybrid. Even still there is reason to consider the others. Both natives, for example, are unique as one is the last shrub in our area to flower, the other the first.

The Common Witchhazel (Hamamelis virginiana) is native to the eastern United States and commonly found along forest edges, sometimes on floodplains and along boggy or rocky streams. It is a large shrub or small multi-stemmed tree with a broadly rounded form growing to 20 feet tall. H. virginiana is the hardiest of all witchhazels surviving at temperatures 35 degrees F below zero. Its leaves are dark, glossy green, about 3 to 6 inches long, turning to a clear yellow in the fall. Unlike the other witchhazel species, the common witchhazel blooms in the fall after all its leaves have dropped. In late autumn and winter, the squiggly yellow petals of fragrant flowers appear. Each of the long petals is narrow and crumpled, looking not unlike the legs of a spider or octopus. The fruit that develops will ripen the following summer and have a unique means of mechanical distribution. In other words, when they are ripe, the seed capsules explode apart with a cracking pop and catapult seeds up to ten yards from the shrub.

Our other native, Vernal Witchhazel (Hamamelis vernalis) is the earliest-flowering shrub blooming during the warmer days of winter and persisting into spring. Its flowers are extremely fragrant but less noticeable due to their small size and the plant’s habit of holding onto last year’s leaves which effectively mask the blooms. The blooms are variable in color from yellow to orange to a rusty color. Each petal is thin and thread-like with the ability to roll up and withdraw as a survival mechanism to avoid freezing damage. This shrub is smaller than the common witchhazel, maturing at 8 to 10 feet tall with a similar spread. Fall color is chartreuse most years but golden-yellow in good years. Vernal Witchhazel is very adaptable to a wide range of soil types, sunlight exposures, and moisture conditions. It would be an excellent choice for naturalized areas, erosion sites, or neglected areas.

Witchhazels have a unique place in the landscape. Not unlike the daffodils that herald in the spring, witchhazels give us a reason to stir during the hardest part of winter and the hope of warmer days ahead.

For more info check out these great UK pages:
http://www.uky.edu/hort/Common-Witchhazel
From the Field to the Table

Zucchini Rosemary Pizza

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shredded zucchini (about 4 medium zucchini)</td>
<td>4 cups</td>
</tr>
<tr>
<td>Mozzarella cheese</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Oregano</td>
<td>1 tsp</td>
</tr>
<tr>
<td>Egg</td>
<td>1</td>
</tr>
<tr>
<td>Salt</td>
<td>1/4 tsp</td>
</tr>
<tr>
<td>Pepper</td>
<td>1/4 tsp</td>
</tr>
<tr>
<td>Small red onion</td>
<td>2</td>
</tr>
<tr>
<td>Small tomatoes</td>
<td>2</td>
</tr>
<tr>
<td>Garlic cloves, minced</td>
<td>2</td>
</tr>
<tr>
<td>Olive oil</td>
<td>2 tbsp</td>
</tr>
<tr>
<td>Fresh rosemary, minced (or 1 tsp dried rosemary)</td>
<td>1 tbsp</td>
</tr>
<tr>
<td>Grated Parmesan cheese</td>
<td>1/4 cup</td>
</tr>
</tbody>
</table>

Preheat the oven to 450 degrees F. Shred the zucchini with a cheese grater. Squeeze out as much water as possible. In a large bowl, measure 4 cups of shredded zucchini. Stir in mozzarella cheese, oregano, egg, salt and pepper. Lightly spray a 12-inch pizza pan with cooking spray. Spoon mixture onto pan to form a 1/2 inch high crust. Bake 15 to 20 minutes, until mixture is set and slightly browned, being careful not to burn. Chop half of a red onion and the tomatoes into small diced pieces. In a small bowl, mix together the olive oil, minced garlic and fresh rosemary. Spread the mixed topping evenly over the baked crust. Spoon onion and tomatoes over the pizza. Bake an additional 10 minutes or until crust is crisp or becomes slightly brown. Remove from oven; sprinkle parmesan cheese over the top and serve.

Yield: 8 slices

Nutritional Analysis: 90 calories, 7 g fat, 2 g saturated fat, 35 mg cholesterol, 300 mg sodium, 3 g carbohydrate, 1 g fiber, 1 g sugar, 4 g protein.

Kentucky Zucchini

SEASON: June through October

NUTRITION FACTS: Squash is low in calories, with the raw vegetable containing only 20 calories per cup. It contains vitamins A and C and is naturally free of fat, cholesterol and sodium.

SELECTION: Popular summer squashes include yellow crookneck, yellow straight-neck, zucchini, cocozelle and patty pan. Summer squash should be picked or purchased when small and tender; both skin and seeds are eaten. The peel holds many of the nutrients so do not peel. It should be harvested when 6 to 8 inches in length. Patty pan squash are best when they are 3 to 4 inches or less in diameter.

STORAGE: Harvest and place unwashed in plastic bags. Store squash in the crisper drawer of the refrigerator. Wash the squash just before preparation.

The storage life of summer squash is brief; use within two to three days.

PREPARATION: Summer squash is a mild-flavored vegetable that combines well with herbs and seasonings. Try it with basil, allspice, rosemary and marjoram. Cook summer squash as a vegetable or use in stews, casseroles and main dishes. Summer squash can be eaten raw, grilled, steamed, sautéed, fried or used in stir fry recipes.

ZUCCHINI
Kentucky Proud Project
County Extension Agents for Family and Consumer Sciences
University of Kentucky, Dietetics and Human Nutrition students
June 2015

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Source: www.fruitsandveggiesmatter.gov

For more information go to http://marshall.ca.uky.edu/AgNaturalResources or follow us on Marshall County Agriculture and Natural Resources Facebook Page

Nicki Bell
Marshall County Agriculture and Natural Resources Agent

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