Breaking News: Alfalfa Weevil Populations Exploding
According to UK Extension Entomologists Ric Bessin and Raul Villanueva recent warm weather has resulted in the emergence of alfalfa weevil larva across the Commonwealth. It is critical that alfalfa growers scout fields immediately and prepare to apply insecticides as soon as the economic thresholds have been reached. For more information on alfalfa weevil scouting and control, please visit the Kentucky Pest News website and see ENTFACT-127: Alfalfa Weevil Field Sampling Program.

Photo: Alfalfa weevil damage and actual weevils collected from three alfalfa stem terminals at the University of Kentucky Grain and Forage Center of Excellence in Princeton, KY. Photo by Raul Villanueva

Dates for UK Spring Fencing School
Spring fencing schools will be offered on May 11th in Hopkinsville and May 13th in Owensboro. Both events include topics such as Fencing types and costs, Fence construction basics, Electric fencing basics, Innovations in fencing technologies and hands-on fence building. Cost is $30 to attend and includes supplies, educational materials and lunch. All Covid rules will apply. Register by visiting http://forages.ca.uky.edu/events.

Making a Plan for Improved Hay Quality
This winter at the Forages at the KCA Symposium, I presented a summary of ten years of hay testing results from the Kentucky Department of Agriculture’s forage testing program. I would like to thank Kim Field from the

Table 1. Impact of stage of maturity on the crude protein, dry matter intake, digestibility and average daily gain of stocker calves.

<table>
<thead>
<tr>
<th>Stage of Maturity</th>
<th>Crude Protein (%)</th>
<th>Dry Matter Intake (lb/day)</th>
<th>Digestibility</th>
<th>Average Daily Gain (lb/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late boot</td>
<td>13.8</td>
<td>13.0</td>
<td>68</td>
<td>1.39</td>
</tr>
<tr>
<td>Early bloom</td>
<td>10.2</td>
<td>11.7</td>
<td>66</td>
<td>0.97</td>
</tr>
</tbody>
</table>


Forage Timely Tips: April

- Graze cover crops using temporary fencing.
- As pasture growth begins, rotate through pastures quickly to keep up with the fast growth of spring.
- Creep-graze calves and lambs, allowing them access to highest-quality pasture.
- Finish re-seeding winter feeding sites where soil disturbance and sod damage occurred.
- As pasture growth exceeds the needs of the livestock, remove some fields from the rotation and allow growth to accumulate for hay or haylage.
- Determine need for supplemental warm season forages such as pearl millet or sudangrass.
- Flash graze pastures newly seeded with clovers to manage competition.
KDA for allowing us to use this dataset and her long and faithful service to the forage and livestock industry in the Commonwealth. This sample set included more than 14,000 hay samples. The full presentation along with the other presentations given as part of this symposium can be viewed on the KYForages YouTube Channel. The results of this analysis showed that only 12% of the samples tested would meet the energy requirements of a lactating brood cow (Figure 1). As most of you know, body condition at calving is closely related to reproductive efficiency in cow-calf operations.

Practical Considerations for Improving Hay Quality

I would like to challenge you to think about simple and practical ways to improve hay quality on your farm and then formulate a plan for implementing these practices. Below you will find a list of practical considerations for improving hay quality.

- Fertilize and lime according to soil test. A balanced fertility program is essential for optimizing hay production. Phosphorus, potassium, and lime should be applied according to soil test results. Avoid using "complete" fertilizers such as 19-19-19. In hay production, these fertilizers commonly over apply phosphorus and under apply potash. More information on soil sampling can be found in AGR-252, Soil Sampling Hayfields and Pastures.

- Apply nitrogen early to promote rapid spring growth. Applying 60-80 lb N/A in mid- to late March will promote early growth in hay meadows, resulting in higher first harvest yields.

- Harvest at the boot stage. The single most important factor impacting forage quality is stage of maturity at harvest. Hayfields should be mowed as soon as the grass reaches the boot-stage. By making the first cutting in a timely manner, we will have time to make a leafy second cutting just prior to the summer months.

- Mow early in the day. Some studies have shown that sugars are highest in late afternoon. However, in high rainfall environments like Kentucky, maximizing curing time is the highest priority. Therefore, hay should be mowed in mid to late morning after the dew has dried off.

- Use mower-conditioner. Conditioning the stems allows for moisture to escape at a faster rate. This shortens curing time and improves your chances of avoiding rain. Conditioning is especially important on first cutting grasses, summer annual grasses, and legumes, all of which tend to have larger stems.

- Set swath on mower-conditioner to the widest possible setting. Maximizing the swath width decreases curing or wilting time by exposing a larger portion of the forage to direct sunlight.

- Rake or ted at 40-50% moisture content. Raking and tedding the forage while it is still pliable reduces leaf loss and maintain forage quality. Once the moisture content is below 40%, leaf loss increases, especially in legumes such as alfalfa and clover.

- Bale at 18-20% moisture. Baling in this moisture range inhibits mold growth and reduces heating. Avoid baling hay that is excessively dry due to high levels of leaf loss and hay that is above 20% moisture due to heating and potential hay fires (unless a preservative is used).

- Store under cover and off the ground. Protecting hay from weathering helps to reduce dry matter losses and maintain forage quality. Much of the weathering damage is a result of the hay bale wicking moisture up from the ground. So, storing hay off the ground on a stone pad can greatly reduce deterioration.

- Do not cut hay fields too close. If not properly adjusted, disc mowers can cut very close to the soil surface and this can cause significant as damage to cool-season grass stands. Do NOT mow perennial cool-season grass stands closer than 3-4 inches.

- Apply nitrogen following the first cutting. Following a timely first harvest, apply 50-60 lb N/A to stimulate regrowth. With adequate rainfall, a high quality second harvest can be made approximately 30 days after the first harvest.

- Allow hayfields to go into summer with some regrowth. Make sure to allow cool-season hayfields to go into summer with at least 5-6 inches of regrowth. This will shade the crown of the plant, moderating its temperature, reduce soil moisture losses, and reduce germination of annual weeds.

- Apply nitrogen in late summer. As the temperatures moderate in late summer and early fall, apply 60 lb N/A to stimulate fall growth. This growth can be grazed or harvested as needed.

- Allow plants time to replenish carbohydrates in the fall. Make sure and time fall hay cuttings to allow stand to regrow and replenish their carbohydrates prior to winter dormancy.

- Test hay and supplement accordingly. Testing hay provides the information needed to develop a supplementation strategy that will keep condition on cows and for marketing hay. For more information on hay testing see AGR-257 Hay Sampling: Strategies for Getting a Good Sample.

It is important to realize that the even the best made plans do not always workout as designed. Extended periods of rainfall that delay harvest, pop-up summer showers that soak an almost perfect hay crop, and equipment failures can all throw a wrench into a well-designed plan. The key to success is moving forward with a positive attitude that allows you to find your way around these roadblocks. ~Dr. Chris Teutsch for Cow Country News.

KY Grazing Calendars are available
Temporary fencing can help to manage spring growth in cool-season pastures. Purchasing high quality UV stabilized polywire with mixed metal strands ensure both longevity and performance of the fence. Photo by: Jimmy Henning
Get your copy from your local county extension office or download from the Forage Website under “Grazing”.

Upcoming Events (see Forage website for details and to register, click on EVENTS)
May 11 - Fencing school, Hopkinsville, KY
May 13 - Fencing school, Owensboro, KY

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Pub of the Month: 2021 Alfalfa and Stored Forage Conference recordings

The 2021 Alfalfa and Stored Forage Conference was held VIRTUALLY on March 2, 3, and 4. The theme of this year’s conference was “Optimizing Forage Quality for the CAS$H Hay Market”. The quality of presentations from this year’s conference were exceptional. If you were not able to attend the VIRTUAL conference, I would encourage you to take a little time and watch these videos. The videos for this year’s and past conferences can be found on the KFYforages YouTube Channel and the Proceedings on the UK Forages Website. Please feel free to share and use these videos and proceedings articles as you see fit. This and all our past Forage Conferences are on KFYforages YouTube. Simply click on “playlists” to review the links to past conferences.

Line up Warm Season Annual Grass Varieties Now

<table>
<thead>
<tr>
<th>Variety</th>
<th>CP</th>
<th>ADF</th>
<th>aNDF</th>
<th>TDN</th>
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<tbody>
<tr>
<td>SS130 BMR</td>
<td>11.5</td>
<td>34.6</td>
<td>60.3</td>
<td>61.6*</td>
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<tr>
<td>AS9302 BMR</td>
<td>11.4</td>
<td>34.8</td>
<td>60.9</td>
<td>61.4*</td>
</tr>
<tr>
<td>Piper</td>
<td>9.3</td>
<td>36.7</td>
<td>62.7</td>
<td>59.3*</td>
</tr>
<tr>
<td>ProMax BMR</td>
<td>9.3</td>
<td>36.9</td>
<td>61.9</td>
<td>59.1</td>
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<tr>
<td>Trudan Headless</td>
<td>9.5</td>
<td>38.5</td>
<td>64.3</td>
<td>57.2</td>
</tr>
<tr>
<td>Mean</td>
<td>10.2</td>
<td>36.3</td>
<td>62.0</td>
<td>59.7</td>
</tr>
<tr>
<td>CV, %</td>
<td>13.1</td>
<td>3.8</td>
<td>3.3</td>
<td>2.6</td>
</tr>
<tr>
<td>LSD,0.05</td>
<td>2.1</td>
<td>2.1</td>
<td>3.2</td>
<td>2.4</td>
</tr>
</tbody>
</table>

TFDLR Varieties:

- Forage Sorghum
- Pearl Millet
- Teff
- Sudangrass
- Sorghum-Sudangrass

For Sudangrass, Sorghum-Sudangrass, Pearl Millet, Teff, and Forage Sorghum. At the back of this report is a summary table showing how numerous varieties have performed in KY over the last 15 years. We have recently begun testing warm season annuals for forage quality through Chris Teutts’ lab in Princeton. Special thanks to Chris and his crew for grinding and running these samples through the NIRS. This report contains complete yield information over the last 3 years for Sudangrass, Sorghum-Sudangrass, Pearl Millet, Teff, and Forage Sorghum.

Tennessee Expands Imported Fire Ant Quarantine Northward to Kentucky Border

Recently, the TN Department of Agriculture expanded the number of counties under Imported Fire Ant (IFA) quarantine. This is significant for Kentucky as IFA is continuing to move northward and several of the newly quarantined counties are on the KY border. IFA colonies have periodically been found in the Purchase Area of Kentucky, mostly in the Land Between the Lakes region between Lake Barkley and Kentucky Lake. Thus far, we have been able to avoid an IFA quarantine by treating and killing individual colonies and not allowing IFA to become established in those areas.

Fire Ant Species & Habits

The red imported fire ant (RIFA), Solenopsis invicta, is native to South America and was first found in the U.S. in the 1940s. It spread from its initial introduction and is common throughout much of the Southern U.S. A second species, the black imported fire ant (BIFA), Solenopsis richteri, was introduced into Mobile, AL in 1918 and has a smaller distribution; it has been found in parts of Mississippi, Alabama, Tennessee, Virginia, South Carolina, and Arkansas. BIFA is more cold-tolerant than RIFA and has been found established further north. Most of the mounds treated in Kentucky have been identified as BIFA; however RIFA has also been identified.

These two species can also hybridize in areas where they both occur. The hybrid may be more cold-tolerant.

Both species have a painful sting that results in a light-colored blister with a reddened area encircling the blister. They clamp on with their powerful jaws and sting victims repeatedly. The reason they are called fire ants is because their venom causes a burning sensation. In sensitive persons, the sting can result in anaphylactic shock. There are some reports that the sting of BIFA is more pronounced than that of RIFA. Besides attacking people, fire ants can attack and sting pets and wildlife. They can also damage seedling corn and soybeans.

Fire ants can have as many 100,000 to 500,000 workers in a colony. They form a raised, soil nest that the sterile workers fiercely defend. We have noticed in Kentucky that the nests are typically in open sunny areas or on south-facing slopes for warmth. They may be found in urban areas, agricultural areas, pastures, and grasslands.

While fire ants can spread locally through their normal mating and dispersal process, they can travel longer distances by hitchhiking in motor vehicles and in or on soil, such as on plants with roots and soil attached, nursery stock, sand, gravel, grass, sod, or soil-moving equipment; additionally, they may be present in hay or on wood that has come in contact with soil. For that reason, the USDA APHIS limits the spread of fire ants by quarantine. They limit the spread of fire ants by requiring inspection and specific treatments for nursery stock, turf, baled hay and straw that have been stored in contact with soil. USDA APHIS also regulates the movement of soil and soil-moving equipment out of quarantine areas.

Kentucky’s Containment Strategy

Our strategy for Kentucky is to identify IFA mounds and treat them as soon as possible so that they do not spread and do not become established. We need people, particularly in southern Kentucky counties along the Tennessee border, to be on the watch for fire ants. The best way to locate fire ants is by visually searching for the raised mounds. If a suspected fire ant mound is found, people should contact their local county Extension office to report the sighting. County agents need to report sightings to the Office of the State Entomologist here at UK.