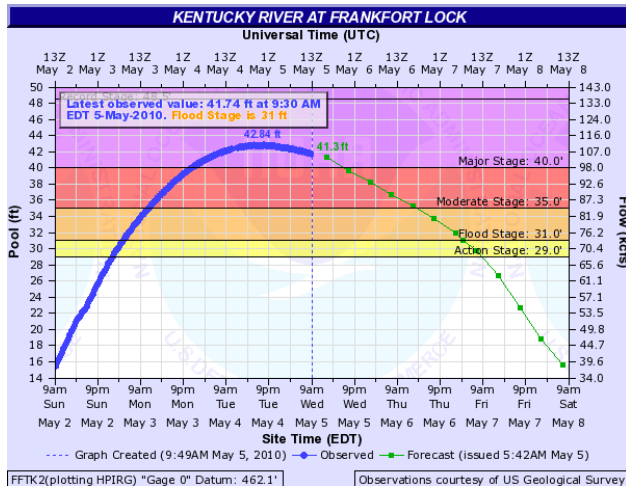




Of Cows & Plows

May 2010



electricity back on in areas that have been flooded before having the system checked.

Depending on the extent of damage, gas lines also could sustain significant damage. Have the gas utility check the system for leaks before continuing service.

Care for the animals

As with humans, the aftermath of disasters pose significant safety and health problems to livestock. Agriculture producers can minimize the safety risk to livestock in the following ways:

1. Gather and dispose of trash, limbs, wire, and damaged equipment that could harm livestock. Clear and repair damaged fences.
2. Make sure livestock have plenty of water and feed that have not been contaminated by pollutants. In some cases, it will be necessary to truck in water and feed, or move livestock to an area free from contamination.
3. Immediately dispose of dead carcasses. Consult state rules on carcass disposal. Check with regulatory authorities to determine if any permits are required for emergency burial.
4. Observe livestock for signs of infectious disease such as pneumonia or foot rot. Animals (or a representative sample) that die immediately following a disaster should be necropsied by a veterinarian.
5. Spray livestock with insect repellent to protect against mosquitoes that may carry disease.

Our web page at

<http://ces.ca.uky.edu/franklin/> has links to a lot of flood information.

Returning to a Farm after a Flood

Disaster recovery can be as dangerous as the disaster itself, especially if no disaster preparedness plan was implemented. This is especially true on farms and ranches where inherent farm hazards such as machinery and equipment, livestock, and agriculture chemicals are displaced and co-mingle, putting all emergency response personnel, farm workers and family members, and livestock in danger. First responders should recognize the hazards that exist and proceed with caution.

Utility check

Look carefully for signs of damage to electrical components. Electrical components, such as switches and outlets, may have debris that will cause electrical hazards. Contact your electric utility for guidance. Never try to turn the



Dr. Chad Lee, UK Grain Specialist, offers the following:

The heavy rainfalls over the past weekend and the anticipated rains this week has many fields under water. According to the latest [USDA Crop Progress & Condition](#) report, about 80% of the corn crop in Kentucky is planted and almost 60% is emerged.

Two resources on assessing damaged corn include [AGR-193: Assessing Flood Damage to Corn](#) and [AGR-195: Replanting Options for Corn](#).

The impact of flooding on corn depends on the depth of flooding, the soil temperature and the duration of flooding. When soil temperatures are 70 degrees F or higher, corn can withstand complete submersion for about 24 hours. Higher soil temperatures reduce that time and lower temperatures increase the time which corn can withstand the submersion.

Assessment of corn can not occur until two or three days after the water has subsided. Plants will most likely look yellow, but if the growing point is white and turgid, the plants are alive. Nitrogen losses occur with submerged fields and the duration of flooding affects how much N is lost.

While losing corn and nitrogen are very frustrating, they don't compare to the loss of lives from this flooding. We hope that you and yours are staying safe.

AGR-193: Assessing Flood Damage to Corn: Estimating Nitrogen Losses from Wet Soils

Wet soils cause nitrogen losses, and determining how much nitrogen is lost is necessary to choose the proper management options. In cases where high intensity rain results in high runoff, leaching losses will probably be low. The primary nitrogen loss mechanism in saturated soils is denitrification, which occurs when soil nitrate nitrogen (NO₃-N) is converted to nitrogen gas by soil bacteria. Two to three days of soil saturation is required for bacteria to begin the denitrification process. Well-drained upland soils that have been wet from a series of rains probably have not experienced much denitrification. Soils in lower landscape positions that stay saturated longer will likely lose more N. Losses can be calculated by estimating 3 to 4 percent loss of fertilizer NO₃-N for each day of saturation. Use Table 3 to determine how much fertilizer NO₃-N was in the soil.

Nitrogen Broadcast Prior to Rain

Farmers sometimes broadcast fertilizer nitrogen on a field within 24 hours of a heavy rain. In most cases, very little nitrogen is lost to runoff, especially if the field was under no-till soil management. The nitrogen fertilizer begins to dissolve almost immediately after being applied to the soil surface and will dissolve completely in a short period of time. As rain begins, the first water that falls moves into the soil, taking most of the fertilizer nitrogen with it. Once in the soil, most of the fertilizer nitrogen is protected from runoff. The only exception is a very intense rain soon after application that also erodes topsoil from sloping areas. Even in this situation, the loss would probably be less than one third of the fertilizer applied.



Farm/City Banquet Results

One of the largest events that the Frankfort Area Chamber of Commerce hosts is the annual Farm/City Banquet sponsored in part by the kind folks at Whitaker Bank. It is also the longest running of its kind (to our knowledge) at 52 years. Carmen Inman's efforts always payoff in a seamless, well-timed community gathering that allows the business world to visit with their rural neighbors. This is the sister event to Farm City Field Day in July.

Five dollars out of every \$10 ticket goes directly to the Western Hills and Franklin County High School FFA programs. The FFA students volunteer their time to wait the tables for this event and they do a fantastic job. Various organizations and businesses sponsor the tables.

The Pioneer Farmer awards this year went to **Bernice Moore, Lowell Goins, Billy League** and **Alvin Wright**. They were honored with a plaque as well as an honorary Commissioner of Agriculture certificate. These fine farmers have spent a lifetime of work on the farm here in Franklin County. All are still contributing to some extent today.

Jack Phillips was honored as the Outstanding Young Farmer. Jack currently lives and farms in the Peaks Mill Area while working for the Frankfort Plant Board. He is raising tobacco as well as cattle and hay.

The Master Conservationist award by the KY Division of Conservation was awarded this year to father and son team **Wilbert and Roger Perkins**. This award is given in recognition for outstanding conservation practices over their lifetime of farming.

Keenan Bishop
County Extension Agent for Agriculture and Natural Resources

EXTENDING GRAZING

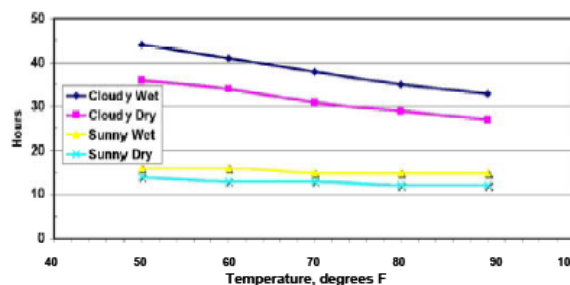
A new publication "Extending Grazing and Reduced Stored Feed Needs" written by forage specialists from Kentucky, Alabama, Illinois, Missouri and Wisconsin was published last month and is now available on the UK Forage website as UK AGR-199 <http://www.uky.edu/Ag/Forage/ForagePublications.htm>



**FRIDAY OCTOBER 22,
2010
6:00 PM**

*SELLING A MAXIMUM OF 300 BRED HEIFERS
ALL BRED HEIFERS GUARANTEED 90 DAYS SAFE IN
CALF,
VACCINATED, DEWORMED,
BRED TO CALVING EASE BULL (AI & PASTURE
EXPOSED) AND SCREENED FOR QUALITY*

Hours to dry alfalfa from 80% to 20% moisture



Source: Rotz and Chien (1985)

USE MICROWAVE TO TEST HAY MOISTURE

If you don't want to invest in a commercial probe or meter to measure hay moisture, consider the microwave method, advises Dennis Hancock, University of Georgia extension forage specialist.

Start with a small scale (a cheap food scale will work) and a hand-me-down microwave. "There's no need to spend much money on these," says Hancock. "Between a yard sale and your favorite discount department store, you should be able to get what you need at about half the cost of a new hay moisture meter."

Once you have the materials on hand, dry about ¼ lb of the forage in the microwave until it reaches a stable weight. Hancock suggests doing this in increments of one to two minutes. He also advises putting a cup of water in the microwave with the hay sample to keep the forage from catching fire.

To come up with the percent moisture, divide the change in weight (before and after) by the beginning weight, then multiple by 100.

For more detailed instructions, go to www.caes.uga.edu/commodities/. Under Hot Topics, download the pdf for *Measuring the Moisture Content of Forage Using a Microwave Oven*. (SOURCE: eHayWeekly, April 14, 2009)

The Extension Office also has hay temperature probes and a moisture meter for loan out as well.

Temperature Guidelines for Hot Hay:

- **150°F** – Entering the danger zone. Take temp daily.
- **160°F** – **Danger!** Inspect every 4 hours to see if the temperature is rising.
- **176°F** – Fire pockets may be anticipated. Call the fire department.
- **212°F** – Critical! In the presence of oxygen, ignition will take place. Storing bales inside or covering large bales will dramatically reduce spoilage losses. In a 5-ft. round bale, 19% of the hay is in the outside 6 in., and 36% in the outside 12 in. (SOURCE: Ontario Ministry of Agriculture, Food and Rural Affairs In Pennsylvania Forage and Grassland News, Vol. 18, No. 2, Spring 2008)

Quality Hay Production

AGR-62,

Table 1. Recommended Stages to Harvest Various Forage Crops.

Plant Species	Time of Harvest
Alfalfa	Late bud to first flower for first cutting, first flower to 1/10 bloom for second and later cuttings.
Bluegrass, Orchardgrass, Tall Fescue, or Timothy	Boot ¹ to early head stage for first cut, aftermath cuts at 4- to 6-week intervals.
Red Clover or Crimson Clover	First flower to 1/10 bloom.
Oats, Barley, or Wheat	Boot to early head stage.
Rye and Triticale	Boot stage or before.
Soybeans	Mid- to full-bloom and before bottom leaves begin to fall.
Annual Lespedeza	Early bloom and before bottom leaves begin to fall.
Ladino Clover or White Clover	Cut at correct stage for companion plant.
Sudangrass, Sorghum Hybrids, Pearl Millet, and Johnsongrass	40-inch height or early boot stage, whichever comes first.
Bermudagrass	Cut when height is 15 to 18 inches.
Caucasian Bluestem	Boot to early head stage.
Big Bluestem, Indiangrass, and Switchgrass	Early head stage.

¹ Boot is stage of growth of a grass just prior to seedhead emergence. This stage can be identified by the presence of an enlarged or swollen area near the top of the main stem.

Table 2. Effect of Stage of Harvest of Fescue Hay on Quality and Animal Gain.*

Stage of Harvest	Dry Matter Intake lb./day	Percent Digestibility	Percent Protein	lb. of Hay Fed per lb. Gain	lb. of Hay per Acre 1st Cutting	lb. of Gain per Day
Late boot to head, cut May 3	13.0	68	13.8	10.1	1334	1.39
Early bloom stage, May 14	11.7	66	10.2	13.5	1838	.97
Early milk stage—seed forming, May 25	8.6	56	7.6	22.5	2823	.42

*Holstein heifers were used, average weight: 500 pounds.

SOURCE: Personal Communication, Monty Montgomery, University of Tennessee.

Table 6. Nutrients Removed by Hay Crops.

Crop	Yield/Acre (Tons)	Approximate lbs per Acre Removed		
		N	P ₂ O ₅	K ₂ O
Alfalfa	5	255	68	245
Red Clover—Orchardgrass	4	136	47	204
Tall Fescue, Orchardgrass, Timothy	3	87	29	144

SOURCE: K.L. Wells and W.O. Thom, 1994. Estimated nutrient and uptake by Kentucky's Crops. Soil Science News and Views Vol. 15, No. 4.

Is It Hay Making Weather?

Visit

http://www.aqwx.ca.uky.edu/cgi-bin/getcast_www_ky?Franklin+035

for a detailed "Precision Ag Forecast" for Franklin County. Get detailed information in 3 hour increments for seven days on temperature, humidity, wind speed, cloud cover, precipitation and drying conditions, plus many other details.

Evaluating New Alfalfa Stands

Garry Lacefield and Ray Smith, UK Extension Forage Specialists

How many plants are enough? This is a good question and one many will be asking and attempting to answer in the next couple weeks. Industry standards suggest that a new stand of alfalfa should have from 25-40 plants per square foot thirty days after seedings (Table 1).

Table 1. Evaluating alfalfa stands.

Plants per square foot needed for optimum yield:

<u>Age</u>	<u>Plants/square foot</u>
New seeding	25-40
1st year	12-20
2nd year	8-12
3rd year and beyond	3-8

(SOURCE: Forage Crop Pocket Guide, page 27)

If you have an average of 25 plants per square foot now or in the next week or so GREAT. We would feel comfortable with an average of 15-20 plants per square foot, uniformly distributed, under the circumstances this spring. With Roundup Ready where you can control weeds effectively, anything above 10-12 would probably be okay.

Minimum stand density required will vary among producers with commercial hay producers requiring more plants per square foot than a beef cow-calf producer looking for supplemental grazing during summer.

If a stand is too thin and you are convinced the majority of seed has emerged, then it is possible to seed more alfalfa into existing stands using no-till (allelopathy is not a factor in these new seedings).

There will also be a late summer option for adding grass or perhaps thickening stands if absolutely necessary.

Flood-damaged Hay and Feeds

Salvaging

Salvaging flooded feed stores is possible, but it must be done very quickly since mold begins to grow quickly, especially in hot weather. If grain is stored in a bin, any dry grain should be removed from the top. The remaining wet grain can be ensiled, taken to a grain dryer or spread out to dry (less than 6 inches deep and stirred daily). Flooded silage should not be fed even if it looks normal.

Flooded hay may be difficult to salvage. It is also at risk of spontaneous combustion, so should be spread out to dry away from buildings. Temperature of the hay can be checked by placing a pipe deep into the middle of the bale and lowering a thermometer on string down the pipe. Take a reading after 20 minutes. If hay temperature is higher than 140 degrees, it should be removed from buildings. Bales should be moved slowly and handled gently since air contact may cause combustion.

Feeding

Hay and feed that have been flood damaged may grow mold. Moldy hay and feeds can be toxic and usually lose most of their nutritive value. Moldy feeds may make cattle go off feed and become depressed and can occasionally cause abortions and death. Inhalation of molds can cause respiratory disease. Young animals are more susceptible than adults.

If Moldy Feeds Are the Only Option

- Test first to know levels of mycotoxins.
- Reserve moldy feeds for adult, nonpregnant, nonlactating animals.
- Dilute moldy feeds with safe feeds.
- Watch closely for signs of illness.
- Add mycotoxin-absorbing products.





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Will There Be Any Farm Flood Disaster Assistance?

Applications available now at the NRCS office!

As with most emergency situations, we can't delay clean up and repairs. In case there is government disaster assistance in the near future, farmers should document all their expenses and time spent on each task such as debris removal, fence repair, crop replacement, labor, etc. careful notes will help with the process whether it is days, weeks or months from now. Call 1-888-229-9795 to contact the FSA office for details & advice.