Beef & More on Drought
By Beth Doran, ISU Extension & Outreach Beef Program Specialists

Water Usage
With limited rains, the question of water availability has surfaced. The Iowa Code is specific about how water would be conserved.

Iowa Code authorizes the Iowa Department of Natural Resources to restrict water usage in the following general order:
- Water conveyed across state boundaries
- Recreational or aesthetic purposes
- Irrigation
- Manufacturing and industrial processes
- Generation of electrical power for public use
- Livestock production
- Human consumption

If you need information about planning for a water shortage, check out ISU’s drought recovery website: http://www.extension.iastate.edu/topic/recovering-disasters

The livestock page contains several fact sheets dealing with water conservation & wells.

Plan for Pasture Recovery
Drought and limited forage supplies led to overgrazed pastures in 2012 and will likely lead to problems in 2013. When forage plants are overgrazed, the roots do not grow as deep and are not able to obtain moisture deeper in the soil. Also, overgrazed forages do not have time to replenish energy stores in the roots and do not over-winter as well.

Consequently, it’s time to start monitoring pastures now and develop a plan for pasture recovery. This spring, pastures may need more recovery and growing time before cattle turn-out in order to regain ‘vigor’. If possible, allow 3 to 4 inches of growth and consider reducing stocking rates by 20 to 30 percent.

Manage fertility inputs, considering both soil fertility and the probability of rain. Test the soil and apply phosphorus and potassium only if needed. Application of nitrogen will stimulate spring growth, especially in grass-based pastures. But, the level of nitrogen may depend on soil moisture. If spring rains are limited, it may be more economical to apply a modest (30-40 pounds/acre) amount of nitrogen early in the spring and assess the likelihood of moisture in later spring and summer. If moisture levels improve, an additional 30-40 pounds/acre could be applied mid-spring and possibly late summer.

Walk the pasture this spring when it begins to ‘green up’ and determine the percentage of soil covered with desirable forage vegetation. Use a ‘better than’ or ‘thinner than’ 70 percent cover as your assessment guide. If there is less than 70% ground cover, consider ‘frost seeding’ or ‘interseeding’ the drought-thinned pastures.

Frost seeding is the broadcasting of legumes or additional grass seed in late winter when the last few weeks of night-freeze and daytime-thaw aids in seed coverage. This is usually done late February to early March. Interseeding is using a drill to no-till plant legumes or grasses into an existing sod. Spring interseeding dates are mid-March through late April. Note that grasses are established more effectively with interseeding than with frost-seeding. Both frost-seeding and interseeding are more effective when the existing pasture is closely grazed to reduce early season sod competition.

In some cases, it may be necessary to completely tear up a pasture and start over with a brand new seeding. If this is the case, grazing will likely be delayed until year two, in order for the grass to get established. This creates a scenario where a producer may have to plant a summer annual to provide forages in the meantime. Bottom-line: monitor pastures now and plan ahead how you will help them recover.

(This article is adapted from material authored by Steve Barnhart, ISU Extension Forage Agronomist)
A Word about Cover Crops
In February, the USDA Risk Management Agency released rules for insuring a crop following a cover crop.

To insure a spring crop following a cover crop you must:
- Not hay or graze or otherwise harvest the cover crop after May 10
- Kill the cover crop prior to planting the spring crop

You are not allowed to plant a spring crop into an established grass or legume. If you want to insure a spring crop, you need to have killed the cover crop (using a herbicide or tillage) before planting the spring crop. Grazing is not considered terminating the cover crop. For more details, contact your insurance agent.

When Planting Trees, Proper Watering is the Key to Success
By Margaret Murphy, ISU Extension & Outreach Horticulture Educator

Last fall, we saw a number of trees go into the winter water-stressed due to the extended dryness of the season. As a result, folks may be wondering about the health of their trees this spring. In general, well-established, hearty trees are pretty resilient. However, if you're left wondering whether or not a tree has survived, be patient and wait until bud break. Branches that are still living will eventually show new growth emerging from the buds.

If you find that you need to replant, one crucial element to a newly planted tree’s survival is proper watering. Freshly planted trees lack the established root system needed for adequate water storage. As such, the tree relies on rain or supplemental watering and generally needs supplemental water even when we are not experiencing drought conditions.

Unfortunately, it is difficult to recommend a set schedule for watering a new tree. How often and how much to water depends on several factors including the amount of rainfall we receive and how well the site holds moisture. For the first few months, the need for watering could be as often as two to three times a week or even daily if the weather conditions are particularly hot, dry, and windy. As the tree grows, watering frequency can be reduced but the watering area will expand.

As a rule of thumb, apply one to two gallons of water, per inch of trunk diameter, directly over the tree's root ball. Inspect the tree and the soil moisture frequently, especially in hot, dry weather, and before you water. It’s important not to overwater as excessive irrigation can lead to root rot. You can monitor soil moisture by digging a small hole with a trowel or soil probe (keep the tool you use small to minimize root injury). Check the soil moisture in the root zone to a depth of about one foot.

To help conserve soil moisture, place two to three inches of mulch over the developing root system (usually out to the tips of the branches). Keep the mulch at least four inches away from the trunk to avoid conditions that invite decay or unwanted pests like insects and rodents. Suggested mulches include: wood chips, shredded bark or pine needles.

Soil Moisture
By Paul Kassel, ISU Extension & Outreach Field Agronomist

The soil moisture deficit is the concern that most farmers have on their minds this spring. The current drought conditions began in mid-July 2011. The following table has the rainfall and the rainfall deficit from July 14 2011 to March 24, 2013.

Table 1. 7/14/11 to 3/24/13 precip, inches

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Britt</td>
<td>28.5</td>
<td>19.4</td>
</tr>
<tr>
<td>Spencer</td>
<td>35.5</td>
<td>6.2</td>
</tr>
<tr>
<td>Pocahontas</td>
<td>32.7</td>
<td>14.8</td>
</tr>
</tbody>
</table>

Crop production during these drought years has been very respectable. The USDA National Ag Statistics corn and soybean yields for Hancock, Clay and Pocahontas county is listed below.

Table 2. County corn and soybean grain yields, bu/a.

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
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</thead>
<tbody>
<tr>
<td>Hancock</td>
<td>143.3</td>
<td>179.8</td>
</tr>
<tr>
<td>Clay</td>
<td>170.1</td>
<td>185.4</td>
</tr>
<tr>
<td>Pocahontas</td>
<td>165.3</td>
<td>181.2</td>
</tr>
</tbody>
</table>

Subsoil moisture is measured at several locations in northwest Iowa in the fall and spring of each year. Three of those locations are listed as examples in table 3. This data shows that subsoil moisture increased from 3.8 to 4.3 inches at these sites in 2011/2012.

Precipitation for the November 2012 to mid-March 2013 time frame was about 4.0 inches – which is about 1.0 inch less than last year. Additional rainfall will be needed in late March and early April of this year to achieve the level of spring subsoil moisture experienced last year.

Table 3. Fall Gain since spring

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>Fall since</th>
<th>spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickinson</td>
<td>1.4</td>
<td>4.3</td>
<td>5.7</td>
</tr>
<tr>
<td>Clay</td>
<td>5.0</td>
<td>3.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Pocahontas</td>
<td>3.3</td>
<td>3.9</td>
<td>7.2</td>
</tr>
</tbody>
</table>
Subsoil moisture levels for the fall of 2012 were, in general, less than those in the fall of 2011. The fall 2012 subsoil moisture levels for those same three locations are listed below.

Table 4. Fall 2012

<table>
<thead>
<tr>
<th>Location</th>
<th>Inches, plant available moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickinson</td>
<td>3.9</td>
</tr>
<tr>
<td>Clay</td>
<td>5.8</td>
</tr>
<tr>
<td>Pocahontas</td>
<td>3.2</td>
</tr>
</tbody>
</table>

One concern about the 2013 season is the depth of the moisture deficit in the soil profile. There are good indications that the 2012 corn and soybean crop accessed soil moisture well below the expected five foot rooting depth. Therefore, our reserve moisture that saved us last summer is quite low. This could be a huge concern if spring rains do not re-charge the subsoil below the top two or three foot of the profile.

Expected rainfall from April 1 to June 1 is about 6.0 – 7.0 inches. Moisture use by corn and soybean crops is very low in the early part of the growing season. Therefore, April to May rainfall can contribute a great deal to soil moisture reserves. However, if this normal rainfall occurs, it will go a long way to alleviating the drought conditions.

The current La Nina/El Nino situation is considered neutral. A neutral La Nina/El Nino situation often produces near normal early season rainfall, moderate summer air temperatures and a dry late season conditions.

**Swine Regional Activities and Website Resources**

By Matt Swantek
ISU Extension & Outreach Swine Program Specialists

Regional Swine Conferences were held in Carroll, Sheldon, Nashua, and Iowa City the last week of February. Lee Schulz (ISU Livestock Economist) updated the attendees on “Livestock & Grain Outlooks”, Phil Granger (ISU Assistant Professor, CVS) on Porcine Respiratory and Enteric Disease Diagnostics, and the Swine Field Specialist covered means and rationales to consider if corn supplies are restricted; feed management and technologies; and how feed programs influence the fertilizer value of manure. Focuses of the papers are the factors that may affect feed efficiency outcomes such as environment, health, equipment, particle size, and dietary ingredients. Recordings from the conference are on the Iowa Pork Producers Association website: [http://www.ipic.iastate.edu/](http://www.ipic.iastate.edu/)

These complete papers and others are located at the website: [www.swinefeedefficiency.com/index.html](http://www.swinefeedefficiency.com/index.html)

- Influence of Particle Size
- Particle Size Testing Methodology
- Influence of Pelleting
- Influence of Temperature
- Impact of Feeder Design and Management

**Drought of 2012**

Water restrictions remain for many counties in Southwestern Iowa. Several drought seminars have been offered with the focus on depending strategies for pork producers should corn supplies be restricted this Spring, Summer and Fall. The positives of the 2012 corn crop has been the low incidence of Aflatoxins and the unexpected normal to high bushel test weights. Test weights have been reported as high as 63 lb/bu in different regions of the state. Corn yields were positive as well for some farms, due to the scattered timely rains for them this past summer. Recordings of the August 2012 Drought Response for Swine Producers are found at Iowa Pork Industry Center websites: [www.ipic.iastate.edu](http://www.ipic.iastate.edu)

**Benchmarking Production.** The Baseline Niche Production Records spreadsheet (Excel Template) is available at the Iowa Pork Industry Center website [www.ipic.iastate.edu](http://www.ipic.iastate.edu) for producers who are looking for an easy one-page method to get performance numbers. Included is the ability to producers to establish their own production database by emailing each of their closeouts to Matt Swantek (mswantek@iastate.edu) or Dave Stender (dstender@iastate.edu). Performance summaries may then be requested for their review and to help make management and production decisions.

**Show Feeds.** Feed costs for show animals may be dramatically higher this year. Corn has been averaging over $7.00/bu and Soybean meal and other ingredients have been tracking higher this year. Corn has been averaging over $7.00/bu and Soybean meal and other ingredients have been tracking higher as well. If one is thinking about mixing their own show feed, remember to consider the equipment needed, ingredient composition and targeted nutrient levels for a successful rate of gain, feed efficiency and body composition. In addition, consider how many pounds per batch is needed to make a properly mixed and resulting proper nutrient levels within that mixed batch of feed. Consider the cost/benefit between programs before making any changes.

**Pork Quality Assurance.** This June the National Pork Board will be rolling out the new PQAPLUS program and includes updates concerning the pig movement and transport. Certification of trainers will be commencing in May and June preparing for the changes in the PQAPLUS program.
CRESTON, Iowa -- Iowa grazing supporters are planning the 2013 edition of the Iowa Grazing Conference set for later this summer. They encourage those who use grazing in their livestock operations to put the June 25-26 event on their calendars now. Iowa State University Extension and Outreach beef program specialist Joe Sellers has been involved with the conference for several years and said this year’s event has classroom and field experiences.

“The featured speaker is Garry Lacefield, a grazing and forage specialist from the University of Kentucky, and we have a great variety of breakout session topics for attendees,” he said. “Improving grazing management, cover crops, using annual forage crops for hay and pasture, using grazing to improve wildlife habitat and environmental impacts of grazing are just a few of the topics on the agenda.”

The conference at the Southwestern Community College campus in Creston runs from 1 p.m. on Tuesday, June 25 to noon on Wednesday, June 26. In addition to breakout sessions and a producer panel, the event also has a pasture walk and barbeque meal on the evening of June 25.

Sellers said final program details and registration information will be available in late April through program sponsors Iowa Beef Center at www.iowabeefcenter.org and Iowa Forage and Grasslands Council at iowafORAGE.org. Other sponsors and planners include ISU Extension and Outreach, the Grazing Lands Conservation Initiative of the Natural Resources Conservation Service, Southwestern Community College and Practical Farmers of Iowa.