Buying a bull is more challenging now than it has ever been. When going to a farm or sale to purchase a bull, you will most likely be given a catalog of numbers called EPDs. EPD stands for Expected Progeny Difference and are the expected differences of a bull’s progeny when compared to the average progeny performance of all bulls of the breed that are evaluated. EPDs are reported in pounds and are directly comparable across all herds within a breed, i.e. Angus compared to Angus. These numbers are good predictors of how the offspring of a particular bull will perform. However, you must realize that environment and management have a large impact on calf performance also.

When looking at a bull’s EPDs you will notice two numbers for each trait. For example, a calving ease for a certain bull is 9 followed by a .68. The first number is the actual EPD and the second is an accuracy value. Accuracy is the reliability that can be placed on an EPD. An accuracy near 1.0 indicates a higher reliability that the EPD will not change drastically. Accuracy is impacted by number of progeny and ancestral records. Most bulls you purchase will have little or no accuracy because they have no progeny.

Descriptions of the most common EPDs follow.

**Calving Ease EPDs (CE or CED):**
Calving Ease EPDs predict the average difference in ease with which a sire’s calves will be born when bred to first-calf heifers, compared to calves from another sire. This number is represented as a percentage of unassisted births. The higher the number the less predicted calving trouble and is a prediction for first-calf heifers only.

**Birth Weight EPDs (BW):**
Birth weight EPDs predict the difference in the average birth weights of a bull’s calves compared to calves.
of other bulls. A positive value indicates heavier than average birth weights, while a negative value indicates lighter than average birth weight. Most producers get caught up with actual birth weights of the bulls. Actual birth weights are not good predictors of how big the offspring will be at birth because there are too many environmental factors that contribute to birth weight. Also, you have to consider that the calf will receive 1/2 of both parents’ genes so a heavy birth weight gene of the sire can be influenced by a light birth weight gene of the dam.

**Weaning Weight EPDs (WW):**

Weaning weight EPDs predict the difference in average 205-day weights, in pounds, of a bull’s calves compared to calves of all other bulls evaluated. A positive value indicates heavier than average weaning weights, while a negative value indicates lighter than average weaning weights.

**Yearling Weight EPDs (YW):**

Yearling weight EPDs predict the differences in average 365-day weight, in pounds, of a bull’s progeny compared to progeny of all other bulls evaluated within the breed. Positive values indicate heavier than average yearling weights while negative values indicate lighter than average yearling weights.

**Milk EPDs (MM or Milk):**

Milk EPDs predict the difference due to milking ability in average 205-day weight of a bull’s daughter’s calves compared to calves of other bulls within the breed. Positive values indicate above average milking ability. If you are saving daughters for replacement heifers this is an important trait to consider. It should be noted that this trait is greatly affected by the level of nutrition and management of the daughters. You must feed them enough to reach that high milking ability.

It is expected that calves out of heifers of Bull B will have 7% (9 minus 2) less unassisted births than Bull A. Progeny of Bull A will weigh 4.2 pounds heavier than the average of the breed at birth but 4.9 pounds heavier than progeny of Bull B. Bull B’s progeny will weigh 0.7 pounds lighter than average at birth and is a good choice to use on heifers. Progeny of Bull B are expected to weigh 17 pounds more than Bull A’s progeny at 365 days and 85 pounds more than average.

When shopping for a bull, you need to have your production goals in mind. Are you looking for a bull to breed heifers to? If so, pay attention to calving ease. Are you feeding your calves out and selling them directly for slaughter? Then you might want to focus more on the carcass EPDs. Most producers use their bulls to breed both cows and heifers and also sell their calves at weaning or shortly after. My advice would be to purchase a bull with moderate calving ease and high weaning weight EPDs but do not sacrifice too much in yearling, milk and carcass EPDs. One point to remember is good EPDs do not make up for poor management. Proper nutrition and health are required to obtain the weights expressed by the EPDs.

By Kendra Graham, Livestock Specialist, University of Missouri Extension, Greenville, MO.

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**Organic Gardening**

**Thursday, April 7, 2011**

**6:00 - 9:00 p.m.**

Mineral Area College in Park Hills, MO at the Arts and Science Building, Room 114.

Taught by Mary Wilson and Linda Williams, Parkland Master Gardeners

To register call University of Missouri Extension at 573-883-3548. Fee: $15
Learn the basics of growing Shiitake Mushrooms on logs.

**Saturday, April 23, 2011**
**9:00 am to noon**
**Cape County Ext. Center, Jackson**
Taught by Marty Calvert, MDC forester. Log and inoculants will be provided to each participant. Call Donna Aufdenberg at 573-238-2420 to register. Fee is $50.00.

Learn the basics of vegetable grafting for disease resistance in tomatoes and melons.

**Tuesday, April 19, 2011**
**9:00 am to noon**
Taught by Donna Aufdenberg and Kate Kammler. To register call 537-238-2420. The fee for the class is $15.00. Participants will need a 12-18 inch deep, solid colored/dark container for keeping plants in as they heel at home.

### Show-Me Select Replacement Heifers

On May 7 at 1:00 p.m., 150 Show Me Select Replacement Heifers will sell in the Southeast Sale at Fruitland Livestock Auction in Fruitland, MO. These heifers were selected from 685 heifers that were enrolled in the program in the summer of 2010. The Missouri Show Me Select Replacement Heifer Program is a Total Quality Management Program for on farm heifer development. Show Me Select provides a reliable source of quality replacements based on management, reproduction and genetics for buyers and the producers who sell the heifers.

Potential heifers that qualify for the Show Me Select Tag have to meet a strict requirement list. There are minimum vaccination requirements at weaning, breeding and at pregnancy check that must be met. Also the heifers must be calfhood vaccinated for Bangs disease, in accordance with State regulations, by an accredited veterinarian.

Heifers must meet requirements for pelvic size, at a pre-breeding examination, of 150 sq centimeters. They are also reproductive tract scored at this time to determine their maturity status. Heifers must also meet requirements for any blemishes and condition score before the sale and must meet a minimum condition score of 5.

There are also strict requirements on EPD’s of bulls that are service sires for the heifers. They meet calving ease standards that are set by the Board of Directors. To try to further assure pregnancy the bred heifers are also pregnancy checked by accredited veterinarians prior to 90 days of pregnancy and also within 30 days of the sale.

The Southeast (SEMO) Show Me Select Replacement Heifer Sale has sold 4,733 heifers since it was started in 1998. Of the 8 sales that started SEMO ranks first in the state for average price received for the heifers and the sale has grossed $5,569,195. SEMO also ranks first in the state in heifers sold in all A.I. lots with 2336 head sold. At present about 65 to 70% of the heifers sold are A.I. bred. This allows for greater accuracy when selecting reliable A.I. bulls to service the heifers.

For more information on the sale or information on how to enroll to qualify to sell heifers call Roger Eakins, Livestock Specialist at 573-243-3581.

By Roger Eakins, Livestock Specialist, University of Missouri Extension, Jackson, MO.

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The U.S. Department of Agriculture’s Centers for Epidemiology and Animal Health and National Agricultural Statistics Service are conducting a national survey to collect information on small-scale ($10,000 to $499,999) livestock operations. The “short questionnaire” has already been mailed to livestock farms so look for the survey. Data collection continues until April 29, 2011.
For Southeast Missouri wheat growers, March is a transition month for wheat. Wheat is ending its tillering phase and entering stem elongation. The beginning mark of stem elongation is called jointing, described as Feekes 6. Jointing is when the first node of the stem is visible above ground. Jointing also is the cutoff for many wheat herbicides, so always be sure to read and follow herbicide label directions and visually inspect your field before making an application. This stage is when the growing point is above ground so grazing animals should be removed before this point. With the growing point exposed above ground, wheat becomes more sensitive to freezing temperatures. Jointing wheat will incur damage if temperatures fall to 24 degrees Fahrenheit or lower. Stem elongation also indicates the increased demand for nitrogen fertilizer. It is critical to have adequate nitrogen in an available form for wheat during this phase of growth. It is critical to monitor wheat for nitrogen stress, especially if nitrogen was applied early in the year and/or soils are prone to leaching or de-nitrification. Wheat may respond to nitrogen applied up to the second node, described as Feekes 7. If possible, avoid nitrogen applications after these stages because typically by the time nitrogen is available to the plant it is a cosmetic response and there is risk of burning the upper leaves, in particular the flag leaf, described as Feekes 8 to 9.

Monitor plants closely following Feekes 8 for disease and insect pests. An early season disease that sometimes moves into our area is stripe rust. The end of stem elongation after flag leaf (Feekes 9) will be the boot stage, described as Feekes 10. Flag leaf health is critical, since it is the primary leaf for photosynthetic production during the third phase, heading. Pay close attention to environmental conditions and any potential disease development; a fungicide application may be warranted during this timing. Also, monitor fields for insects, in particular true armyworm since this pest can rapidly defoliate flag leaves and clip heads.

For more information on wheat management during stem elongation contact your local MU Extension office and ask for IPM 1022 “Management of Soft Winter Wheat” or find it on the web at http://extension.missouri.edu/.

By Anthony Ohmes, Agronomy Specialist, University of Missouri Extension, Charleston, MO.
Watch for Black Cutworms this Spring

The Black Cutworm, goes by several names including floodplain cutworm, greasy cutworm and overflow worm. In SE Missouri we know the cutworm for its damage in corn fields in early spring. However it can also cause damage to cotton, soybean, turf grasses, wheat and even vegetables such as tomatoes and lettuce. Each year we see some damage from black cutworm in corn fields with some fields reaching economic threshold. What should you look for and are there management options that will reduce the likelihood of your fields reaching threshold?

While the black cutworm can over winter in SE Missouri, most over winter on the Gulf Coast or Mexico and migrate north in the spring. Researchers from Missouri and Iowa State released tagged moths in Louisiana and recaptured these same moths 3-4 days later in the Corn Belt. Each moth can lay more than 1000 eggs with the eggs generally laid in low, wet areas of fields with thick vegetation. Damage occurs when larvae feed on seedling plants often times completely cutting off the plant and reducing plant populations below optimum levels. Cool conditions can increase damage potential as it slows plant growth. As the plants move beyond the seedling stage damage is minimized.

There are several management strategies to help prevent damage to corn or other seedlings. Tillage or an early herbicide burndown at 14 days prior to planting reduces the attractiveness of the field to flying moths. Research has shown that most economic damage occurs from larvae already present in the field at the time of planting. Commercially available seed treatments are the first line of defense. It is critical to scout your field early, especially if emergence or overall growth is slowed due to weather, and often for any potential pest outbreak.

Postemergence rescue treatments are warranted when 1-2% or more corn plants are cut below ground or 2 -3% or more plants have been cut above ground and larvae are present. Larvae are gray to black, 1 to 2 inches long when full grown and form a C when disturbed. In cotton, treatment is needed when stand counts fall below 3 plants/foot of row and larvae are present. In soybeans thresholds are when 20% of stand is cut, gaps are greater than 12 inches and larvae are still present.

For more information on black cutworm, contact your local MU Extension office and ask for guide sheet G7112 “Black Cutworm in Missouri” or find it on the web at http://extension.missouri.edu/

By Anthony Ohmes, Agronomy Specialist, University of Missouri Extension, Charleston, MO.

Black cutworm caterpillar and cut corn seedling.
Photo by W.M. Hantsbarger
IPMimages.org
Good Agriculture Practices (GAP) represent an approach recognized by government and by the private sector that is designed to verify that farms are operating sustainably in order to create a product that is safe and of high quality for the public. This program is divided into three sections; farm practices, handling practices and storage practices with a general section that must be completed for each. Each link in the production chain works to improve on only the section(s) used in their operation.

A GAP agreement verifies that the producer complies with the Food and Drug Administration’s “Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables.”

The review that is offered by the USDA centers around possible hazards that could affect produce such as water sources, worker training, traceability of product through records, outside contaminants and crisis management.

While GAP agreements are voluntary, by following these practices a producer has the potential to increase their market. Some brokers require GAP certification before they will work with a grower. Retail markets are responding to recent contamination issues related to fresh produce by requiring or looking favorably on producers that have some type of nationally recognized certification that complies with the food and drug administration.

While GAP agreements are voluntary, by following these practices a producer has the potential to increase their market. Some brokers require GAP certification before they will work with a grower. Retail markets are responding to recent contamination issues related to fresh produce by requiring or looking favorably on producers that have some type of nationally recognized certification that complies with the food and drug administration.

If certification is your goal you will have to host an audit of your farm or facility. The first audit is usually the longest so it helps to be as prepared as possible. Missouri has a USDA auditor for GAP certification. At least 10 producers were certified in Missouri in 2010.

For more information on Good Ag Practices or certification contact your local extension specialist.

By Sarah Denkler, Horticulture Specialist, University of Missouri Extension, Poplar Bluff, MO.

http://extension.missouri.edu/butler/MoAgNews.aspx
Farm To School

A large and local market for fresh produce exists in our own backyard. This market is our local schools. Nationally, there is a push for children in our schools to consume locally grown foodstuffs – including fruits, vegetables and meats. The reason is, with merit, is that locally grown foods tend to be healthier, fresher and provide local farmers with income.

On March 2, I attended a videoconference on food to schools. This conference was organized by Bill McKelvey with the University of Missouri Extension. The conference covered numerous aspects of the farm to schools programs, including efforts in St. Louis and Columbia, where the school systems have adopted this program.

There is no doubt that farm to schools offers opportunities for farmers in the Southeast Missouri Region. A school system can purchase fruits and vegetables directly from a producer, prepare it and serve it to students. There is no state or federal produce inspection, unlike meats, where there are USDA meat inspectors. However, most schools in our region are serviced by food service companies, and there may be contractual limitations on their ability to purchase food from other sources.

Some of the food service companies are making efforts to provide local foods to schools through their distribution network. However, these companies will usually require liability insurance. Additionally, some of the food service companies, or schools for that matter, may require that a farm become GAP (Good Agricultural Practices) certified.

In Southeast Missouri, there are a few farmers selling directly to schools. The market for schools will be in the fall and early spring for fresh produce. In Southeast Missouri, melons and peaches are grown in abundance, and a farmer interested in expanding markets, could approach the schools to move these commodities through the system. Other commodities, for example tomatoes, lettuce and greens, with planning could be grown into the fall, and with the use of greenhouses or high tunnels, have an extended season through early winter.

Acquiring a school market for your commodities will take planning. This is one instance, where going it alone, may not be the best approach. USDA, value added producers grants can be used to determine the feasibility of a local food system. Group projects, where there are several farmers involved, will receive a higher priority than those of individual producers. If you are interested in pursuing the feasibility of a local food or a farm to school system, and would like to pursue a USDA grant, please contact me at 573-568-3344 or ayersv@missouri.edu.

Garden Education

Learn the basics of vegetable gardening.

Friday, April 1, 2011. 9:00 a.m. at the Delta Center in Portageville, MO.

Topics include Soil, Garden Design, Native Gardening, Irrigation, and Pest Issues. The day will end with a demonstration at Ag Distributors on how to properly mix plant medicines. There is a $10.00 registration fee. Call Ray Nabors at 573-379-5421 to sign up. Lunch is provided.
opportunity to practice techniques and skills learned during the workshop that day. The workshop will be at Henson Farms in Williamsville. Participants will meet at the shop of Jeff Henson located at the intersection of Highway A and V near Williamsville. From there the group will travel to a few locations and view different types of fencing systems. Cost for the program will be $10 per person and includes refreshments and handouts. We ask that you please RSVP by April 19 to the Wayne County University of Missouri Extension office by calling 573-224-5600 ext. 8 or e-mail Kendra Graham at grahamkk@missouri.edu.

Wayne Hosts Fence Building Workshop - April

Fence building or repairing is always a common chore on farms and ranches. Barbed and woven wire fences have been around a while but the newer electric fencing materials can cause some confusion as to what to do with all those insulators, crimps and tighteners.

On Thursday, April 21 from 2:00 to 5:00 p.m.
Frank Wideman, Natural Resource Engineer from Perryville, will try to clear up some of the questions related to building fence along with teaching some techniques. Topics to be covered at the workshop include: electric fencing – chargers, grounds, wire types, posts; wire fencing – barbed wire, woven wire, and brace posts. Participants will have the opportunity to practice techniques and skills learned during the workshop that day. The workshop will be at Henson Farms in Williamsville. Participants will meet at the shop of Jeff Henson located at the intersection of Highway A and V near Williamsville. From there the group will travel to a few locations and view different types of fencing systems. Cost for the program will be $10 per person and includes refreshments and handouts. We ask that you please RSVP by April 19 to the Wayne County University of Missouri Extension office by calling 573-224-5600 ext. 8 or e-mail Kendra Graham at grahamkk@missouri.edu.