

AG *Newsline*

AG-BUSINESS, AGRONOMY, HORTICULTURE,
LIVESTOCK AND COMMUNITY DEVELOPMENT
FOR WEST-CENTRAL MISSOURI

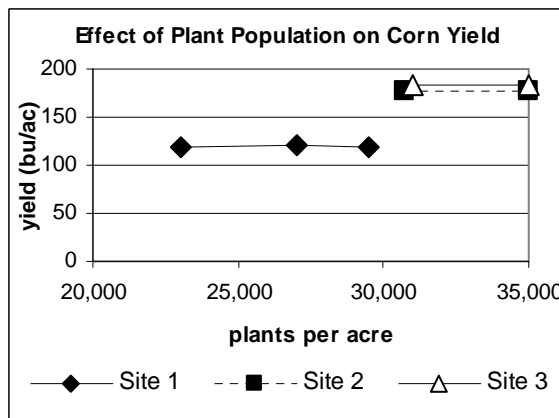
JANUARY, FEBRUARY,
MARCH 2007

Yield Effect of Varying Corn Plant Populations

In the Midwest, corn seeding rates increase approximately 400 seeds per acre, per year. However, does an increase in seeding rate result in increased yield, or simply higher seed costs? In 2006, three on-farm research studies, located near Richmond and Henrietta, investigated the effect plant population has on corn yield.

Corn yield response to varying plant populations is dependent on soil type and yield potential. MU Extension research conducted at the Columbia location has repeatedly shown 98% of the maximum corn yield potential to be achieved with 22,000 plants per acre. However, soils with higher yield potential (200-250 bu/ac) have shown a yield response to increasing plant populations above 22,000 plants per acre (ppa). In 2005, Wayne Flanary (MU Extension Regional Agronomist for northwest Missouri) compared corn yield at 28,000 ppa versus 24,000 ppa, 20,000 ppa, and lower. Corn yield (250 bu/ac) was maximized at 28,000 ppa.

2006 data from the Richmond and Henrietta on-farm research sites, in which plant populations ranging from 24,000 to 35,000 ppa were investigated, showed a lack of yield response to differing plant populations at all three locations. 'Site 1' was planted to Burrus 491B YG, 'Site 2' was planted to DKC 60-19



YGRR, and 'Site 3' was planted to DKC 61-72 RR; all seed was treated with Poncho 250.

'Site 1' experienced greater drought stress than 'Sites 2' and '3' in 2006. A similar response to varying plant populations for corn under drought stress occurred at the University of Missouri-Columbia location during 2003; the yield plateau of 130 bu/ac was reached at 16,000 to 30,000 plants per acre.

An increase in yield was not seen with increasing plant population from 31,000 ppa to 35,000 ppa at 'Site 2' or 'Site 3'. Similarly, Iowa State Research conducted at 6 locations from 1997-2000 showed that yield is maximized at a final plant population of 32,000 ppa.

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“That cow wasn’t supposed to calve today”

For most beef producers, their cows are in her last trimester of pregnancy and calving season is quickly approaching.

The start of winters like this one cause concern for producers with early-calving cows and ignite the discussion of when to calve. Often producers question when a particular cow is due. Most producers have a handy calving table that projects the calving date of the cow based on the day she was bred. For example, the "IRM Pocket Reference" guide shows a cow bred May 21 is due to calve on March 1. However, that is only a good target date.

Kris Ringwall, a North Dakota State University Extension Beef Specialist, Director of the NDSU Dickinson Research Center and Executive Director of the North Dakota Beef Cattle Improvement Association, has summarized research on actual calving dates verses projected calving dates from known breeding dates.

The targeted start of the calving season was March 1, but do the cows begin calving on March 1? Unfortunately, the cows do not read tables. Basically, a cow will calve when she and her calf decide the time is right. In reviewing cow records, 462 cows were artificially inseminated, and conceived to the unit of semen she was inseminated with. Of these 462 cows, the average gestation length was 282.5 days. Of the 462 cows, only 87 actually calved on the expected date. These cows were expected to calve 283 days after breeding, on March 1st. In reality, the first live calf arrived February 11, then one on the 13th and one on the 16th.

Three calves arrived on February 17, three on the 19th, one on the 20th, three on the 21st, nine on the 22nd, eight on the 23rd, and a rush on the 24th produced 17 calves.

On the 25th, 19 calves were born, 36 on the 26th, 38 on the 27th, 39 on the 28th and finally on the due date of March 1, 87 calves were born. On March 2, 53 cows calve, on the 3rd, 25 calves, on the 4th, 16 calves, on the 5th, 22 calves, on the 6th, 20 calves, on the 7th, 15 calves, and on the 8th, only four calves. Just as there appeared to be a let up, on the 9th, 15 calves were born, on the 10th, 12 calves, and on the 11th, one calf. Finally, the last fifteen calves were born the final week with the last two calves born on the 19th of March. All 462 cows conceived on the same day, but the calving season lasted 32 days. Approximately 80 percent calved within an 11-day window, 95 percent in a 19-day window, and 98 percent within a 28-day window.

Therefore, if you think you know when your cow is going to calve, I'll bet you she won't calve on the day she's due. Cows don't calve in a seven to 10-day window, no matter who thinks they should. Projected calving dates offer assistance in managing your cowherd, but don't guarantee she will calve on time, early or late. Therefore, don't be surprised if that bred heifer you purchased calves two weeks early or be disappointed if she calves two weeks late.

A Cow's Wish List for 2007

Every year, people make New Year's resolutions, only to have them fail or be broken. We often think about different things we want to accomplish or achieve with our work, with our family, or many other activities. Every new year I like to refer back to an article written by John Hall, Beef Cattle Extension Specialist at Virginia Tech, that describes what a cow may wish for during the upcoming new year. It points out several good management practices that should be implemented into a beef cow/calf operation.

- Good working facilities so I don't get hurt.
- Improved pasture management for better grazing.
- A good free choice mineral that contains trace minerals.
- Regular body condition checks to decide when to supplement.
- A bull that has good, balanced EPD's, maybe even an AI bull.
- Attention during calving.
- A 60 to 90 day breeding season, I don't like to bull that much.
- A complete vaccination program that includes leptospirosis.
- Process my calf at birth so he gets a good start and is identified.
- Dewormer for my calves, but possibly not for me as I may be resistant to worms!
- Control those darn flies.
- A vaccination and weaning program for my calf so he/she won't get sick.
- A veterinarian that understands my needs.
- A marketing program for my calf, so he/she sells well and you can afford to keep me another year.



By David Hoffman, MU Extension Livestock Specialist

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WHAT'S IN A NAME

or a label?

As you wander grocery store aisles, farmers' markets, or search through restaurant menus in the coming months, you may notice additional green and white 'USDA: Certified Organic' seals or designations peering back at you.

You may see food label claims such as 'Natural,' 'Free-Range' or 'Hormone-Free' at the meat counter. Or a farmer at an area farmers' market might be discussing how their produce was 'Grown Using Organic Methods.' Perhaps you will even see a 'Fair Trade' label on a package of coffee or chocolate. You are also likely to see 'Locally Grown' labeled products in grocery stores, farmers' markets or at roadside stands. But why are you seeing these labels more frequently and what do they mean?

The USDA defines Certified Organic as: crops raised without using most conventional pesticides, petroleum-based fertilizers, or sewage sludge-based fertilizers. Animals raised on an organic operation must be fed organic feed and given access to the outdoors. They are given no antibiotics or growth hormones. To ensure producers meet the USDA's National Organic Program (NOP) standards, farms are inspected by a USDA approved certifying agent. USDA 'Natural' claims limit product content and processing methods and can have exceptions (see USDA's website). Products may also be labeled as:

100% Organic: must contain **ONLY** organically produced ingredients

Organic: must contain **AT LEAST 95%** organically produced ingredients

Made with Organic Ingredients: must

contain **AT LEAST 70%** organic ingredients.

Natural: product does not contain artificial flavor, coloring ingredients, chemical preservatives or any other artificial or synthetic ingredients and the product and its ingredients are not more than minimally processed.

Minimal processing: traditional processes used to make food edible, preserve it or make safe *or* physical processes that do not fundamentally alter the raw products or that only separate a whole food into component parts (such as ground beef). There are exceptions to the use of the 'Natural' claim (see: www.usda.gov).

Free Range: implies that a meat or poultry product comes from an animal that was raised in the open air or was free to roam. There is no standard definition of this method of production.

Hormone-Free: no additional hormones where administered to the animal beyond those that occur in the animals natural biological processes. There is no standard definition of this method of production.

Fair-Trade: a term used to describe a social-responsibility movement demanding that farmers receive fair prices for their



products; also describes products that are produced by these farmers. There is no standard definition of this method of production.

In order to sell a 'Certified Organic' product, producers must meet the standards of the NOP and be inspected by a licensed organic certifying agent. There is a fee involved in the certification and inspection process. Some producers feel that this fee is a burdensome cost and that it outweighs the benefit that they would receive in monetary gains for supplying a certified organic product. For this reason, a number of producers have begun to sell a non-certified product that may or may not equal or exceed the NOP standards and label the product as 'Grown Using Organic Methods.' Consumers appear to understand this issue and often discuss production methods and farming practices with farmers using this or similar claims to gain a better understanding of how their foods were produced.

It is important to remember that only the 'USDA-Certified Organic' label is backed by a certifying agent. The USDA has begun discussions regarding the 'Natural' label and a potential program but the agency has not yet developed any certification program and it, is currently, considered a label claim. **Cont. on page 5.**



*By Crystal Weber, University of Missouri Extension CD Specialist
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WHO IS YOUR neighbor?

Many areas of the West Central Region are developing very quickly into housing developments.

As the city continues to move out toward the rural areas, more and more pressure is being put on some of our traditional agriculture activities; particularly livestock production. However, crop producers can also experience some issues that they need to be aware of as well. Moving wide equipment down some of our smaller roads can create some uneasiness for many of our neighbors who have never tried to move equipment. They do not realize how slow a combine moves or how hard it is to stop a truck full of grain.

Like the city, living conditions are best when we can all be good neighbors. That means we must start trying to develop good relationships with those around us. We now have to spend time with the lender to educate him not only about our operation, but about agriculture in general. We also need to spend some time developing positive relationships with our neighbors. Help them understand what you do and how you do it. Invite them to ride along in the combine or take them through your livestock facility. Trust me, they will be impressed with the technol-

ogy. It all boils to one simple philosophy. We live where we do, not because we have to, but because we want to farm and we like the lifestyle farming allows for us and our family. Likewise, the recent rural transplant down the road likes the lifestyle rural living allows his family.

There are some things we can do to help the relationship with our suburban neighbors. One thing might be to consider when we move our equipment and trucks; try to time it when they are at work, or at home for dinner. Also, you might want to move your cattle pen over the hill so the whole neighborhood doesn't have to listen to the calves during weaning. Little changes and some consideration can help create a great relationship between you and your new neighbors.

In today's society, we can no longer afford an attitude of "well you moved to the country, so you'll have to put up with the country smells and noises". Your new neighbors will have an influence on your lives in many ways and we in agriculture must work to be good neighbors.

Missouri Master Wildlifer Program

WILDLIFE CONSERVATION
ON PRIVATE LANDS

The Missouri Master Wildlifer Program is designed for landowners and wildlife enthusiasts who are interested in learning about the biology and management of Missouri's wildlife. Participants will find the shortcourse valuable in highlighting management approaches for wildlife in forest, grassland and farm settings.

The 8-session course will provide information on the biology and life history for a variety of wildlife species, as well as on the habitats for which they depend. In addition, special emphasis will be placed on managing habitats for wildlife species that provide landowners with recreational opportunities on their property. Participants will obtain the knowledge and tools necessary to enhance habitat for wildlife that can be enjoyed by themselves, family and friends, and outdoor enthusiasts. Curriculum will include a Student Manual and supplemental materials; these materials for the 8-session course are covered in the \$75.00 registration fee.

To register or for more information, please contact the Jackson County MU Extension Center at 816/252-5051 (ask for Mary Ethington).

Classes will be held at the Blue River Community College, located at: 1501 NW Jefferson in Blue Springs, MO



By *Wayne Prewitt*, MU Extension Ag-Business Specialist

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SPECIFICS REGARDING

Food Labels

(CONTINUED)

The food industry is experiencing tremendous growth in the organic and natural food sectors, and thus, the reason why you are seeing more of these labels and claims.

USDA economic data shows that organic food retail sales in 1997 totaled roughly \$3.5 billion. By 2003 that same market segment had increased to \$10.3 billion. This increased market share is currently out-pacing the growth in the conventional food sector. Products formally relegated to health-food stores are becoming common products on the shelves of major retailers across the country. Stores have begun to promote their organic, natural and local products through advertising and media efforts and through the expanding 'health food' sections found in a number of retailers. Farmers' markets, Community Supported Agriculture (CSA) farms, and farm-stands have increased in number and popularity.

Consumers have begun demanding their products with more intensity and this has led to further development in season-extending methods of agriculture. To meet this growing demand, agricultural producers have investigated the production and processing methods which consumers desire. The University of Missouri Extension offers a growing season-long program to familiarize and train agriculture producers on the methodology used in organic and natural food production and marketing avenues. The Missouri Department of Agriculture created the AgriMissouri Program to assist producers in marketing of Missouri-grown and processed agriculture products. Multi-state universities have partnered to facilitate educational programs on production methods and various grant programs offer assistance to farmers

investigating alternative production methods. These programs also assist consumers in locating organic, natural and locally grown products.

However, there is currently no conclusive evidence to determine whether organic, natural, free-range or locally grown products are safer or more nutritious than their conventionally produced and processed counterparts; but that is not deterring consumers from choosing products with these labels. A number of consumers feel that the alternative production methods of these foods offer a more natural or wholesome product. But, as organic, natural and local products become more readily available, what do the labels mean?

Another label gaining in popularity refers to products being locally produced or processed. 'Locally Grown' designations have gained in popularity as consumers become more aware of how their food purchasing power impacts their local environment, economy and agricultural communities. Many consumers who purchase 'local' do so because they have become more aware of where their food dollars, money spent on raw and processed food products at grocery stores, farmers' markets, restaurants, etc, eventually wind up.

For example, money spent on a "Washington Grown" apple is divvied up, according to contractual obligations,



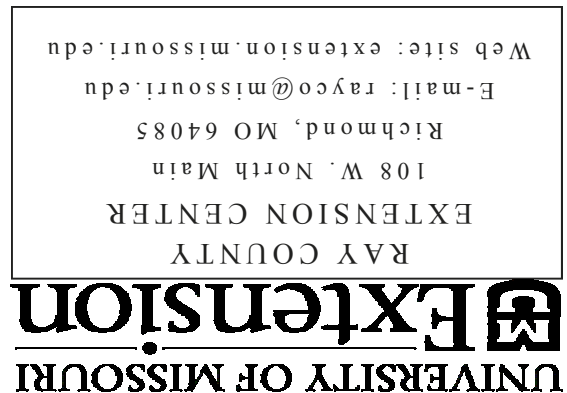
among the local retailer where the apple is purchased, the grocery's distributor (and possibly a third-party transportation company) and the grower. Additionally, money may go to marketing companies, grower cooperatives, seed companies and additional entities involved in the production and movement of the apple from the state of Washington to Missouri. However, a dollar spent to purchase a "Locally Grown" apple from a Missouri orchard means that the bulk of the dollar will remain with the grower, minus their production costs.

So what do all these labels mean for you the market grower or consumer? Labels assist consumers in differentiating products. In June, a 'Locally Grown' strawberry at the Blue Springs Farmers' Market will help connect a consumer to a Missouri farm nearby. The little red berry will evoke pastoral images of a life that may not exist in the suburban community. In July, a fresh, Missouri-grown 'Certified Organic' tomato at a local grocery store will differentiate itself from a similar product trucked in from the coast. Its shiny red skin and fresh-off-the-vine goodness will tell you that it was picked at the peak of ripeness with concern for the ground where it was grown.

Will the food you buy tell you anything about where it was grown or how it was produced?



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Calendar of *Local Events*

**FOR STATEWIDE EVENTS, CHECK THE WEB AT:
ACCESS.OUTREACH.MISSOURI.EDU/UOECALENDAR**

January 23	Alfalfa meeting at the Vernon County Fairgrounds; call 417/448-2560 to register and for more information.
February-March	Private Pesticide Applicator License Re/certification Classes for Ray, Lafayette, Clay, Platte, Jackson, and Johnson Counties. Call 816/776-6961 to register and for more information.
February 1	‘Food Safety: From Field to Harvest to Market’ workshop at the Johnson County Fairgrounds in Warrensburg, 10 AM-2 PM. Contact the Missouri Dept. of Agriculture at 573/751-4339 or agrimeo@mda.mo.gov .
February 8	‘Risk Management Agency Programs and Sustainable Agriculture Funding Opportunities’ workshop; 5:30-8:30 PM at the Guadalupe Center in Kansas City. Register by contacting Jose Garcia at 573/884-3794, GarciaJL@missouri.edu .