

ISU Extension in Johnson County

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In This Issue:

- 1-2 | Soil Management and Land Valuation Conference
- 2 | Diesel Yardage Calculator
- 3 –4 | Four-State Dairy Nutrition Conference
- 4-5 | Field Crop Scout School
- 5 | Forage Options for Horses
- 6-7 | Questions and Answers about Avian Influenza
- 8-9 | Preparing for Spring Chicks
- 9 | Southeast Iowa Research and Demonstration Farm Field Day
- 9 | Tri-State Forest Stewardship Conference
- 10-12 | Consumers Respond to Meat Price Differences
- 13 | Custom Rate Survey
- 14-15 | Annuals for Shade
- 16 | Floral Arranging Workshop
- 17 | Publications Highlight Various Perennials and Annuals to Enjoy

Soil Management and Land Valuation Conference is May 18

By: Wendong Zhang, ISU Assistant Professor and Extension Economist

AMES, Iowa – Record high commodity prices, crop inputs and land values are topics that will drive discussion at the 94th annual [Soil Management and Land Valuation Conference](#), May 18 in Ames.

The average acre of Iowa farmland increased nearly 30% last year, according to results of the [Iowa State University Land Value Survey](#), released in November. Many variables continue to change in today's agricultural landscape and will be part of the discussion.

This year's conference will be offered in person at Iowa State University's Scheman Building from 8:15 a.m. to 4:30 p.m., as well as virtually via Zoom. The in-person registration fee is \$150 and the virtual option costs \$175.

"This year's program will examine several current issues in rural property management, appraisal, and sales and purchases, as well as agricultural policy," said Wendong Zhang, associate professor in economics and extension economist at Iowa State. "We have lined up a dozen soil land management and land valuation professionals to address these issues."

A half-dozen current issues and their implications to soil management and land valuation will be discussed. The topics include the U.S. and global agricultural economy outlook, a panel discussion on farmland and equipment values, a weather outlook and its impacts on agricultural production, the skyrocketing fertilizer and other input costs, a panel discussion on conservation easements and land trusts, and an agricultural market outlook focusing on crops.

The conference offers networking opportunities for professionals who have an interest in agricultural land, land management and land valuation. Additionally, participants have the opportunity through an online survey before the conference to "gaze into their crystal balls," and will be asked to provide their estimates of future land values in Iowa and corn and soybean prices via an online survey distributed before the conference.

Sponsored by Iowa State University's College of Agriculture and Life Sciences and ISU Extension and Outreach, the Soil Management and Land Valuation Conference is intended for farm managers, rural appraisers, real estate brokers and others interested in the land market in Iowa.

This is the longest running conference at Iowa State in both research and extension, and 2022 will mark the 94th annual meeting in this series. The conference is intended for anyone who has an interest in agricultural land, land management and land valuation. The program is planned each year by the ISU Extension and Outreach economics team within Iowa State's Department of Economics.

Participants can receive 6.5 hours of real estate continuing education credits from the Iowa Real Estate Commission, and 7 hours of appraiser continuing education credits from the Real Estate Appraiser Examining Board. There will also be three \$50 gift card giveaway opportunities for the participants throughout the day.

Other presenters from Iowa State will include Chad Hart, professor in economics and extension grain markets specialist; and Bobby Martens, associate professor and agricultural supply chain specialist with ISU Extension and Outreach.

Register online at <https://www.regcytes.extension.iastate.edu/smlv/register/>.

For questions regarding the conference content, contact Wendong Zhang at 515-294-2536 or wdzhang@iastate.edu.

Diesel Yardage Calculator Can Help Producers Estimate Yardage Costs

By: Sherry Hoyer, Iowa Beef Center

AMES, Iowa – Current retail values of diesel fuel can be used as an index to estimate current and near-future yardage charges in maintaining livestock. Iowa Beef Center associate scientist Garland Dahlke said it's important for producers to know their costs, especially in light of higher fuel prices.

Energy cost are highly correlated to all other costs of production and as energy costs climb the cost of doing business climbs proportionately. When feeding cattle the yardage charge, or more accurately, the items that make up the yardage cost are influenced by energy costs, and diesel fuel prices are a good gauge to what should be happening to the yardage charge within a given operation and when it needs to be adjusted.

Dahlke has updated the Iowa Beef Center's Yardage-Diesel Fuel Relationship calculator to help producers determine cost estimates. This Excel-based calculator allows an existing yardage fee to be adjusted as changes in diesel fuel price occur.

The calculator file is available for free download from the [calculators page on the IBC website](#).

For more information on the use of energy, specifically diesel fuel, as a common input from which others are influenced determining yardage costs, see this ISU Animal Industry Report by Dahlke: "[Diesel Fuel Price as a means of Forecasting Livestock Yardage Costs](#)."

Four-State Dairy Nutrition and Management Conference Set for June

By: Jennifer Bentley, ISU Extension Dairy Sepcailist



DUBUQUE, Iowa – Learn the latest information about dairy nutrition and management at the 2022 Four-State Dairy Nutrition and Management Conference June 1 and 2 at the Grand River Center in Dubuque, Iowa. This conference features information on improving transition cow performance as well as other pertinent information.

RP Nutrient's pre-conference symposium focuses on uncovering profit opportunities. Anita Menconi, of Evonik, will provide an overview and outlook of the global dairy nutrition industry. Jesse Goff, professor emeritus with Iowa State University College of Veterinary Medicine, will cover common pitfalls when feeding a low DCAD diet. Milk

Money CEO Jay Joy will discuss how to develop your business by developing your people and Mark Hanigan, Virginia Tech, will show how to balance for amino acids using the NASEM 2021 model.

"This conference provides a great networking opportunity for the dairy industry as well as hearing the latest in dairy nutrition and management research relevant to Midwest dairies," said Jenn Bentley, dairy specialist with Iowa State University Extension and Outreach.

Four State conference speakers include Tom Overton, of Cornell University, discussing how to feed fresh cows for improved health and performance. Jim Drackley, of the University of Illinois, will be talking about rethinking the transition period and Heather White, of the University of Wisconsin, will explain about using short-term choline supplementation to provide long term benefits.

June 2 speakers include Mary Beth Hall, USDA Forage Research Center providing a NASEM carbohydrate requirement update. Lance Baumgard, endowed professor in dairy nutrition at Iowa State University, will discuss how transition cow myths can influence the interpretation of a nutritionist's success. Gavin Staley, Diamond V, will cover why heifer maturity matters.

Select breakout topics include:

- Relationship between transition cow nutrition and management strategies and outcomes.
- Utilizing alternative feeds for profit and sustainability.
- Heat stress indicators in dry cows and pre-weaned calves.
- Developing your people for high performance.
- Why productive life matters.
- Dry off inflammation and transition cow performance.
- Alternative forages for dry cows.
- Modifying milk components.
- Circadian feeding strategies to improve performance.

Zinpro's post-conference symposium includes Jeff Firkins, of Ohio State University, talking about the role of essential isoacids in improving rumen function. Andrew LePiere will discuss quantifying and modeling branch chain VFA in CNCPS. Dana Tomlinson will discuss how essential isoacids can improve dairy profitability.

In addition to the educational program, there is a trade show with 50 companies exhibiting their latest products an evening reception and plenty of time to network with other participants. Continuing education credits are available.

This conference is a collaborative effort of Iowa State University Extension and Outreach, University of Illinois Extension, University of Minnesota Extension and University of Wisconsin-Extension.

For more information and to register, visit <http://fourstatedairy.org/> or contact Wisconsin Agri-Service Association, 608-223-1111, or Jim Salfer at salfe001@umn.edu or 320-203-6093. The conference registration fee is \$150 until May 20 and \$175 after.

Field Crop Scout School is May 19 in Cedar Rapids

By: Rebecca Vittetoe, ISU Extension Field Agronomist



AMES, Iowa – Iowa State University Extension and Outreach will offer a Field Crop Scout School May 19, at Kirkwood in Cedar Rapids.

The Field Crop Scout School is intended to be a foundational course, providing essential information for effective and efficient crop scouting.

The program features sessions such as corn and soybean growth and development, pest identification and scouting methods for beginning crop scouts. All speakers are part of ISU Extension and Outreach.

Topics to be covered include:

- Crop scouting tips and tricks – Virgil Schmitt, extension field agronomist.
- Corn and soybean growth and development and staging – Mark Licht, assistant professor of agronomy and cropping systems specialist.
- Crops disease identification – Alison Robertson, professor of plant pathology and extension plant pathologist.
- Weed identification – Meaghan Anderson, extension field agronomist.
- Insect pest identification – Erin Hodgson, professor of entomology and extension entomologist.
- Other crop issues and challenges (nutrient deficiencies, herbicide injury, etc.) – Virgil Schmitt and Rebecca Vittetoe, extension field agronomists.
- Hands-on practice out in the field – Terry Basol, Josh Michel, Clarabell Probasco, Virgil Schmitt and Rebecca Vittetoe, extension field agronomists

“This Field Crop Scout School is a great opportunity for those wanting to refresh their knowledge and skills, as well as for those new to crop scouting,” said Rebecca Vittetoe. “The educational sessions, hands-on practice out in the field and field guide publications make this an exceptional value for those looking to increase their toolbox of resources to be better growers or crop scouts.”

The following publications and resources are included with registration to the Field Crop Scout School:

[Soybean Diseases](#) and [Corn Diseases](#) booklets: a combined 88-page compendium of soybean and corn diseases in Iowa and the greater north central region, in full color. Each guide is complete with disease life cycles and diagrams, as well as foliar disease estimation charts.

[Field Crop Insects](#): contains descriptions and color images of more than 55 pest and beneficial

insects, as well as information on insect life cycle, damage, scouting and management options. There is also information on basic entomology and integrated pest management tactics.

- Early, mid and late season corn and soybean scouting cards: These scouting cards are record keeping tools that outline diseases, insects and disorders that occur to corn and soybean plants during the early, mid and late parts of the growing season.

A digital [Corn and Soybean Field Guide](#): includes updated text and 375 images, illustrations, diagrams and tables to assist farmers with identifying corn and soybean diseases, insects and disorders found throughout the Midwest. This 158-page guide focuses on development stages, pesticide decisions and production-related topics to help you when scouting fields this summer.

A digital [Weed Identification Field Guide 2nd Edition](#): contains 35 illustrations and more than 250 high-quality photographs of weeds found in Iowa. Palmer amaranth information was added to this 108-page field guide, and information on herbicide resistance and management was updated from the first edition.

Advance registration is required. The cost of \$100 includes above printed and digital publications, lunch and refreshments. Registration for the course closes May 12, and the course is limited to 70 students.

The Field Crop Scout School will be held at the Kirkwood Community College Horticulture Building (6301 Kirkwood Blvd. SW) in Cedar Rapids. Check-in begins at 8:30 a.m., with the program running from 9 a.m. to 3:30 p.m. For more information and to register, visit www.aep.iastate.edu/scout. Contact Agriculture and Natural Resources Program Services at 515-294-6429 or anr@iastate.edu.

Forage Options for Horses Described and Compared in New Guide

By: Peggy Auwerda, ISU Extension Equine Specialist

AMES, Iowa – Equine owners have numerous choices when it comes to which forages to feed their horses. In order to help make the decision easier, Iowa State University Extension and Outreach has released a new publication called [“Forages for Horses in Iowa.”](#)

A dozen different species of legumes and grasses are covered, along with information on how to seed each species and maximize the yield potential.

“A mature horse that is not working hard will eat 1.5 to 2 pounds of air-dry feed per 100 pounds of body weight,” said Peggy Auwerda, associate professor in animal science and extension equine specialist. “That would be 15 to 20 pounds of hay daily for a 1,000-pound horse. In Iowa, horses will require about 2 tons of hay per head per year, plus summer pasture.”

Pasture is an ideal forage for horses in the spring, summer and fall, but during winter months, a high-quality hay is essential.

The publication explains how to identify each plant, its flower and seed, and its best uses. The publication also gives advice on how to seed new forages, and how to manage established grasses and legumes so they grow at their fullest potential.

“This information will help Iowa horse owners with decision making for the management of land used for pasture or hay production,” said Auwerda. “The descriptions of legumes and cool season grasses provide background information to help equine owners understand the types of forages used in horse pastures.”

Although horses can eat almost any forage, they should not have access to sorghum and sudangrass, which can cause poisoning. They can eat clovers, but clover causes horses to slobber and may not be ideal for show animals.

The nutritional needs of the horse will depend on its age and what it is being used for. Information for gestating and lactating mares is covered in depth in a second ISU Extension and Outreach publication, called [Nutrition for the Gestating and Lactating Mare](#).

For more information, Auwerda can be reached at peggy@iastate.edu or 515-294-5260.

Questions and Answers about Avian Influenza



Avian influenza continues to be confirmed across Iowa and the nation. Here are some common questions and answers from Iowa State University Extension and Outreach that can help inform consumers, bird owners and poultry producers.

What is avian influenza?

Avian influenza is an infectious virus that affects wild birds and domestic poultry caused by a type A influenza virus in a family of viruses called Orthomyxovirus. There are two groups of viruses based on its ability to cause disease in domestic poultry: low pathogenic avian influenza, which usually causes only mild illness and can be present in chickens, turkeys and other gallinaceous birds without showing any signs; and high pathogenic avian influenza, which spreads rapidly causing severe disease and high death rate in chickens and turkeys. Wild birds carry both types of AI and can act as a source of infection to domestic poultry. This risk is particularly high during the migration season in fall and spring. The AI we are concerned about is HPAI. What are some signs people should watch out for that would indicate avian influenza?

Since avian influenza is a respiratory virus, it can cause symptoms like coughing, sneezing, nasal discharge and swollen sinuses; but a red flag would be a sudden increase in death rate and especially if you don't have a good reason for why the bird(s) died. Other signs to look for include diarrhea, neurologic issues like depressed and lethargic birds, huddling birds, drop in feed and water consumption, and drop in egg production.

Are poultry products safe to eat?

HPAI detections in birds do not present an immediate public health concern and poultry products are safe to eat. There is a lot of information about "bird flu" and that people can get sick from eating poultry products but that is not true! HPAI does not disseminate in poultry products and affected birds do not make it to the food supply chain. Cooking eggs and poultry products will kill any potentially harmful things such as salmonella.

How is avian influenza spread?

AI is primarily spread by direct contact between healthy birds and infected birds, and through indirect contact with contaminated equipment and materials, such as boots, clothing, cars and anything that has contact with infected birds. The virus is shed through infected birds' feces and secretions from the nose, mouth and eyes. The easiest way to describe it is thinking that this is like the flu in people or COVID-19.

If folks suspect they may have avian influenza on their farm or in their backyard flock, what should they do?

If you suspect HPAI you must contact the state veterinarian or USDA before taking any further actions. There is a HPAI Tool kit provided by the Iowa Poultry Association in collaboration with the Iowa Department of Ag that has all these numbers.

- **During Office Hours** (8 a.m. to 4 p.m.): IDALS Reporting Line: 515-281-5305, USDA Reporting Line: 515-284-4140
- **After Hours:** Jeff Kaisand: 515-240-6632; Kevin Petersburg: 515-669-6043.

The other important part is to isolate and quarantine your flock to limit the spread of potential disease.

How can we prevent the spread of foreign diseases, such as avian influenza?

Poultry and small flock owners should strengthen their biosecurity practices to keep the outside out, and keep the inside in. And in the event you find dead birds on your farm or your backyard flock, or if you see signs that look like HPAI, don't wait to call! Early detection is key in controlling an outbreak and preventing it from spreading to other poultry.

Good biosecurity is something we should practice all the time. What does good biosecurity look like?

Good biosecurity needs people to run it and a plan, and it has to make sense to you. It could be anything from limiting foot traffic on your farm, having a change of boots and clothing to chore birds, not borrowing tools and equipment from your neighbors, preventing any contact, direct or indirect with wild birds, and making sure to take a shower and wash hands after being exposed to other birds that are not yours, especially if you go out hunting.

A good trick to remember is T-I-P-S, which stands for Traffic control, Isolation, Pest control, and Sanitation.

Where can I go for more information about HPAI?

[HPAI tool kit](#)

- ISU twitter/facebook sent out information about biosecurity
- [APHIS website](#)

If you have questions about sampling birds and testing birds for AI, there is a list of trained veterinarians across Iowa that are willing and capable to help you out ([vet list and vet map](#)).

Where can I go to learn more about biosecurity?

[HPAI tool kit](#)

[USDA Defend the Flock website](#)

Center for Food Security and Public Health

[CFSPH poultry biosecurity website: https://poultrybiosecurity.org/](https://poultrybiosecurity.org/)

Resource: [Protect Your Birds](#)

Resource: [Step 1: Movement Risks and Biosecurity](#)

Preparing for Spring Chicks: Tips and Resources for Success

By: Amy Powell, ISU Animal Science and 4-H

AMES, Iowa – As Easter approaches and spring chicks begin to appear at local farm stores, Iowa State University Extension and Outreach Youth Animal Science Education Specialist Amy Powell offers some tips and resources for those looking to try their hand at chicken rearing.

The first step to introducing poultry into a backyard farm is selecting a breed. Most backyard breeds are considered “dual purpose,” which means they are raised for both meat and eggs.

“Most chicks available at farm stores are pretty hardy,” explained Powell. “They’re usually Rhode Island Reds, or a crossbreed like Black Star or Red Star.”

Those looking to introduce several new chickens, or a special breed of chicken, can also use catalogs or an online service to order chicks. However, most ordering services require a minimum of six chicks in order to ship. Powell recommends using a local hatchery. “In my experience, it’s less likely that a rooster might accidentally slip into the mix when you order from a hatchery rather than getting chicks at a farm store, but you will likely get healthy chicks either way,” said Powell.

Housing is also an important consideration when building a flock. Chicks younger than six weeks require a brooding period, where they will need to be kept inside and warm. Powell recommends a [4-H publication from the University of Tennessee Extension](#), which addresses specific temperatures for brooding based on the chicks’ age and answers other common questions about the process.

A chicken coop should also be safe from predators, including neighborhood cats and dogs. “Anything will eat a chicken, including dogs and cats, so predator awareness is essential,” warned Powell.

While chicks generally tend to be healthy, in order to keep both people and poultry safe, it is important to maintain hygienic practices to keep them that way. It is important to have clean clothes, boots and hands around poultry to prevent illness.

“One thing to keep in mind is promoting good biosecurity, since chickens can carry salmonella,” said Powell. “It is also important to be aware of highly pathogenic avian influenza, or HPAI, since there has been an increase in detections lately.”

Poultry owners are encouraged to consult extension resources [outlining good biosecurity practices and answering questions about HPAI](#).

Chicks and adult chickens also will need access to food and water. Chicken feed sold at farm stores is a great option, as it has been specifically formulated to meet a chicken’s needs at various stages of growth. Chicks under six weeks should be given starter feed, which has a higher level of protein to promote healthy growth.

After six weeks, chicks being raised for meat should be given a finisher diet until they are processed, while those being raised as layers or for breeding purposes should be given a grower diet. At 20 weeks, or after hens begin laying, hens should be switched to a layer diet.

Finally, it is important to check local restrictions before bringing home chickens. In Ames, there are no restrictions on backyard chickens so long as they are being held in safe, sanitary housing and being kept reasonably quiet and healthy. However, different areas may have different restrictions.

Raising chickens is a fun and educational way to engage with agriculture and food production,

especially for children. Powell recommends that children interested in raising poultry [get involved with 4-H](#), where they can learn more about livestock and enter competitions. A short course offering advice on getting started with chickens is also available through the [Iowa State University Extension and Outreach Extension Store](#). Keeping some simple tips in mind can make chicken ownership a rewarding experience.

Southeast Iowa Research and Demonstration Farm Field Day

Save the Date for the Southeast Iowa Research and Demonstration Farm Field Day! The event will be hosted on Thursday, July 7th and will feature CCA training in the morning from 9 am to noon. The topics of discussion will be “New Horizons in Corn Rootworm Management” and also “Soil and Water Conservation and Soil Health”, lunch will be included. Everyone is welcome to attend in the afternoon at 1 pm for a presentation from Antonio Mallarino, a ISU Soil Fertility Specialist, who will present research on using pelletized lime vs agriculture lime. Daren Mueller, an ISU Associate Professor and Extension Plant Pathologist, will be discussing fungicide use on soybeans. Lastly, Erin Hodgson, an ISU Associate Professor and Extension Entomologist, will be discussing corn rootworm management. CCA credits will also be available for attending the afternoon session. For more information please contact Virgil Schmitt at (563) 263-5701 or vschmitt@iastate.edu.



Tri-State Forest Stewardship Conference Provides Practical Information for Forest Landowners

By: Billy Beck ISU Extension Forestry Specialist

AMES, Iowa – Landowners and forest stewards in the Midwest are encouraged to attend this year’s [Tri-State Forest Stewardship Conference](#) May 21 in northwestern Illinois. The conference is sponsored by Iowa State University Extension and Outreach and the University of Illinois Extension Forestry Program.

The event will include speakers from both universities, as well as the Iowa Department of Natural Resources, Illinois DNR, private forestry consultants, forest soils graduate students and more. According to Billy Beck, forestry specialist with ISU Extension and Outreach, attendees can expect topics ranging from traditional woodland management techniques to invasive species ecology and ID, prescribed woodland fire, forest wildlife management and soils and soil erosion in woodlands. The field day represents an opportunity to engage with Midwestern natural resource practitioners, agency personnel, academics and landowners. Students within natural resource disciplines (undergraduate, graduate and high school) are highly encouraged to participate.

“We are thrilled for the return of the Tri-State in 2022,” said Beck. “In addition to being an educational event, the conference represents an incredible networking opportunity – one where forest landowners and enthusiasts can talk trees with folks that share similar challenges, and visit one-on-one with forestry and natural resource professionals, in a fun and informal setting.”

The conference is scheduled for Saturday, May 21, from 9 a.m. to 3 p.m., at Mississippi Palisades State Park in Savanna, Illinois. Registration is \$30 and includes lunch. Participants are invited to register <https://go.illinois.edu/TristateForestry>.

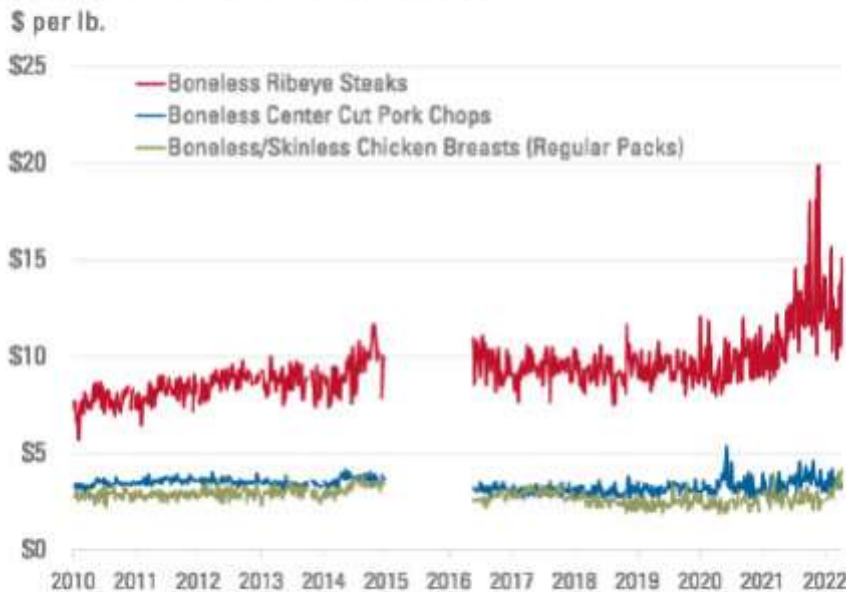
Consumers Respond to Meat Price Differences

By: Lee Schulz, ISU Extension Economist

Ribeye steaks are the most popular steak sold in the summer, according to the Beef Checkoff. Pork chops are the most popular cut of pork, according to the Pork Checkoff. Boneless center cut pork chops are sometimes called an "America's Cut." Two in five Americans say that the breast is their favorite cut of chicken, according to the National Chicken Council. Price comparisons among these cuts can offer notable insights into the meat market.

For the week of April 8 thru April 14, bone-in ribeye steaks averaged \$9.91/lb. at major retail supermarkets according to the USDA National Retail Report - Beef published by the Agricultural Marketing Service, Livestock, Poultry, and Grain Market News division. This was 19.8% higher than the same week last year. Boneless ribeye steaks were \$15.08/lb., up 33.8% from 2021.

Figure 1. Advertised Prices at Major Retail Supermarket Outlets National, Weekly. Data source: USDA-AMS.



The equivalent, USDA National Retail Report - Pork, showed bone-in center cut chops at \$2.75/lb. and boneless center cut chops at \$3.24/lb. These advertised prices were up 16.5% and down 19.4%, respectively, compared to a year ago.

USDA's National Retail Report - Chicken showed boneless/skinless chicken breasts in value packs (generally greater than 3 lbs.) averaged \$3.15/lb. this year compared to \$2.12/lb. during the second week of April 2021. This 48.6% price surge was larger than the price hike of regular packs (less than 3 lbs.), which, at \$4.14/lb., were up 37.1% year over year.

Nominal dollar prices matter. But relative values are the important consumer demand driver. Recall, demand for any good is a function of consumers' tastes and preferences, income levels (or budget constraints), and prices of competing substitute and complementary products.

Two views on price relationships

The Consumer Price Index (CPI) provides a wide-angle view on changes in prices consumers pay over time. The US Bureau of Labor Statistics releases the CPI each month. In March 2022, the all items index (not adjusted seasonally) was 8.5% higher than in March 2021. Core CPI inflation, which excludes food and energy, which tend to be volatile, was up 6.5%.

The food index was up 8.8%. Meats and poultry indices outpaced price hikes for most other goods, surging 14.8% and 13.2%, respectively, compared to March 2021. But two other essential expenditures reached even deeper into consumers' wallets, with

transportation up 22.6% and energy rocketing 32.0% higher.

We can zoom in on meat and poultry by looking at relative values. We could use any cut as the base. Using boneless ribeye steak as a base is a straightforward, relative value comparison. Boneless ribeyes are more

expensive than both boneless center cut pork chops and boneless/skinless chicken breasts in regular packs.

The challenge for beef is clear. Beef's price is rising relative to beef's two main competitors.

From 2016 through 2020 boneless ribeye steak prices averaged 3.7 times the prices of boneless/skinless chicken breasts in regular packs, up from 2.7 times in 2010. From 2016 through 2020 boneless ribeyes averaged 3.0 times the prices of boneless center cut pork chops, up from 2.3 in 2010.

From another angle, 2016 through 2020 prices of boneless/skinless chicken breasts in regular packs averaged 27.7% of boneless ribeye steak prices. Boneless center cut pork chop prices averaged 33.4% of boneless ribeye steak prices. Those percentages were some of the lowest pork and chicken prices relative to beef on record.

Boneless ribeye steak prices increased at a faster pace during 2021. Prices of boneless/skinless chicken breasts in regular packs averaged 23.2% of boneless ribeye steak prices. Boneless center cut pork chop prices averaged 29.9% of boneless ribeye steak prices.

So far in 2022, relative prices for boneless/skinless chicken breasts in regular packs are back to recent averages at 27.3% of boneless ribeye steak prices, closely matching the 2016 to 2020 period. Boneless center cut pork chops have remained more competitive with ribeyes. This year, these pork chop prices have averaged 28.8% of boneless ribeye steak prices, more similar to last year.

A major reason for the surge in both absolute prices and relative prices of boneless ribeye steaks, and beef in general, is strong consumer preferences. Beef's price hikes are larger than the supply levels would typically dictate. People are creatures of habit. We buy many things because we like them. We change only when something major, such as a significant change in relative cost, causes us to reconsider our habitual purchases. But recalibrating our purchasing behavior in

response to new price relationships takes time. Also, after a year of pandemic-related life style disruptions people were busting at the seams for some normalcy and needed to celebrate. Beef is a celebration food.

How much will consumers switch?

At some point, beef prices may get so high relative to pork and poultry that even the most ardent beef lovers will shop around. Economists have tools to predict the possible magnitude of switches.

Cross-price elasticity of demand measures how much the quantity demanded of one product changes in response to a change in the price of another product. For example, say the cross-price elasticity for beef with respect to the price of chicken is 0.05. That means a 1% decrease in the price of chicken decreases quantity demanded of beef by 0.05%. Expanding the decimal point, a 20% dip in chicken prices relative to beef prices should only shave quantity demanded of beef by 1%. That relationship assumes all else holds constant.

A positive cross-price elasticity means that products are substitutes, chicken for beef, for example. A negative cross-price elasticity means that products are complements. Vegetables, grains, potatoes, and sauces (think barbecue sauce or applesauce for pork) are complementary goods to meat. However, the quantity demanded of meat is generally not very responsive to changes in the prices of these complementary products. The logic, consumers purchase a desired meat (beef, pork, or chicken) first and then choose a side dish or ingredients to accompany their choice of meat.

Own-price elasticity of demand measures the responsiveness in the quantity demanded of a product to a change in its own price. For example, an own-price elasticity for beef of -0.86 means that a 1% increase in the price of beef decreases quantity demanded of beef by 0.86%, all else equal. A 20% price increase

would shave quantity demanded 17.2%. A product is said to be price inelastic—not responsive to price—when the absolute value of its own-price elasticity is less than 1.0.

Some demand elasticities published in academic and government research are based on data that are 30-75 years old. More recent research suggests it now takes a larger price hike of beef over pork and poultry to entice consumers to switch. That is, beef is becoming more cross-price inelastic. Willingness of consumers to keep buying increasingly pricey beef suggests beef is becoming more price inelastic to changes in its own price. Both measures becoming more inelastic reflect rock solid consumer demand for beef.

Versatility complicates analysis

So far we have discussed substitution across meats. That is beef versus pork, beef versus chicken, or pork versus chicken. Other relative prices are also important. Meat and poultry products are highly versatile. So something is available for everyone on any budget. Consumers can interchange cuts in several recipes.

Even within cuts, relative prices matter. Consider bone-in versus boneless. Cuts with the bone left in are typically less expensive. Bone-in cuts often provide the most flavor, but trade-offs exist. The bone and higher fat content mean less edible meat and gauging serving sizes can be more difficult. Plus fat and bone may require more work to "get to the meat of the cut." Bone-in cuts can take a little longer to cook. Bone-in options may not be pre-packaged as readily, so consumers might need to pay a visit to a grocer's meat counter, or a butcher, to find them.

Long-run averages suggest bone-in cut prices are about 85% of their boneless equivalents for ribeye steaks and center cut pork chops. Value pack prices of boneless/skinless chicken breasts are 80% that of regular packs. These relative prices can change dramatically from week to week. Consider in 2022 alone,

bone-in prices for some weeks have been roughly at par with boneless prices. Other weeks they have been as low as 65%. The same goes for value packs of boneless/skinless chicken breasts versus regular packs.

Prudent consumers continually scrutinize weekly meat and poultry features to get the most meat for their food dollars.



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Custom Rate Survey Shows Average Costs of Common Farming Practices

By: Alejandro Plastina, ISU Extension Economist

Many Iowa farmers hire some custom machine work in their farm business or perform custom work for others. Others rent machinery or perform other services.

In order to help producers and custom operators examine the market, Iowa State University Extension and Outreach publishes the [Iowa Farm Custom Rate Survey](#).

This year's survey, published in March, includes 122 responses and nearly 3,400 custom rates for tasks related to tillage, planting and seeding, spraying, harvesting, farm labor and more.

Most custom rates saw an increase of 3-10%. The cost for labor increased almost 14%, reflecting the challenges of a tight labor market nationwide.

Custom planting ranges from \$11 to \$40 per acre, depending on the type of planter and set-up. Combining corn shows an average of \$36.75 per acre and combining soybeans averages \$36.05 per acre.

Some costs have already trended higher, due to increases in diesel and fuel prices since the survey was issued. The survey assumed diesel prices would be \$3.33 a gallon in 2022, based on forecasts from the US Energy Information Administration. The survey may lag increases in diesel prices and other inputs in some areas. This means that for custom farming practices that involve these inputs, the cost may be even higher.

The information in the survey is meant to be a starting point for farmers and agribusiness to engage in conversations and negotiations. The survey is not meant to set the rate for a particular practice or operator. This is an opinion survey and represents the responses of participants.

This survey is only possible with the participation of Iowa farmers, custom operators and farm managers. To join the survey list for 2023, email the survey authors.

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Yard and Garden: Annuals for Shade

By: Aaron J. Steil, Consumer Horticulture Extension Specialist

AMES, Iowa -- The garden centers and greenhouses are fully-stocked with annuals for spring planting. Annuals are a perfect addition to the landscape to provide color that lasts throughout the summer. Although most annuals prefer several hours of direct sunlight for maximum growth and bloom, there are a few annuals that prefer the darker corners of the garden. In this article, Iowa State University Extension and Outreach horticulturists answer questions about the annual plants that can be grown in the shady spots of the landscape in Iowa.

How much light do shade gardens receive?



Not all shady garden areas are created equal, and not all shade gardens are void of direct sun. In fact, most shaded areas well-suited for growing annuals should receive some direct light during the day. Shade gardens can be classified as shade, part shade or deep shade based on the amount of direct sunlight they receive. A shade garden is any location that receives one to three hours of direct sunlight each day. Many shade-loving annuals prefer dappled shade or those areas that receive direct sunlight in the morning when temperatures are cooler. Plants may respond differently if the direct light comes later in the day. This light in late afternoon and early evening is typically hotter and more intense. Part shade locations receive three to six hours of direct sunlight a day. Deep shade receives no direct sunlight during the day and can be one of the most difficult locations to grow any plants. Annuals can be the perfect plants for these areas because you can try something new each year and experiment to find the best species for that site.

What are the challenges with growing annuals in the shade?

Often the most prevailing challenge in shade gardens is the competition from trees. The roots of established trees can compete with other plants for moisture and nutrients. In addition, it can be difficult to plant around the tree roots. If digging is too difficult or is causing damage to tree roots, consider growing annuals in a container. Nearly all shade-loving annuals do well in containers or hanging baskets. Because of the lower light levels, shade gardens tend to have cooler temperatures and retain soil moisture longer than sunnier garden areas. Cooler temperatures mean these garden areas warm up later in the spring, and moist soils with low light levels can favor pests like slugs and snails. Deep shade created by buildings, overhangs, walls or fences can sometimes create light levels that are so low that even shade loving annuals cannot thrive. Selecting annuals that prefer cool temperatures, consistently moist soils and/or the appropriate amount of direct sunlight can allow for success despite these challenges.

What annuals are good for shade?

A shade garden receives one to three hours of sunlight a day, ideally in the morning or as dappled light throughout the day. Annuals that can be successfully grown in shady areas include wax begonia (*Begonia* × *semperflorens-cultorum*), impatiens (*Impatiens walleriana*), coleus (*Coleus scutellarioides* syn. *Solenostemon*), wishbone flower (*Torenia fournieri*), Browallia or silver bells (*Browallia speciosa*), polka dot plant (*Hypoestes phyllostachya*), caladium (*Caladium bicolor*), tuberous begonia (*Begonia* × *tuberhybrida*) and pansy (*Viola* × *wittrockiana*).

What annuals are good for part-shade locations?

Part shade locations receive three to six hours of direct sunlight a day. Often those annuals that tolerate full shade will grow and bloom even better in part shade locations, especially if the direct sunlight comes in the morning hours. There are several sun-loving annuals that will tolerate part shade locations and still bloom and grow, just not as vigorously as they would in more light. Annuals well-suited for part shade locations include, New Guinea impatiens (*Impatiens ×hawkeri*), angel wing begonia (*Begonia*), nasturtium (*Tropaeolum*), flowering tobacco (*Nicotiana*), cupflower (*Nierembergia*), rose balsam (*Impatiens balsamina*), bachelor button (*Centaurea*), pinks (*Dianthus*), bells of Ireland (*Moluccella*), bacopa (*sutera cordata*), forget-me-not (*Myosotis*), baby blue eyes (*Nemophila*), perilla (*Perillafrutescens*), heliotrope (*Heliotropium arborescens*), Persian shield (*Strobilanthes dyerianus*), Swan River daisy (*Brachycome*), fuschia (*Fuschia*) and elephant ear (*Colocasia*).

What can I grow in garden areas with deep shade?

Deep shade areas received no direct sunlight and many shade-loving annuals may not thrive in these very low light locations. These areas are usually created by buildings, walls or fences and further shaded by nearby shrubs and trees. If possible, limb up trees or shrubs to allow more light into the area. Despite these very difficult growing conditions, a few annuals can be potentially good, colorful additions to deep shade. Impatiens (*Impatiens walleriana*), caladium (*Caladium bicolor*), tuberous begonia (*Begonia × tuberhybrida*) and most tropical houseplants can be good options for deep shade.

Can I use houseplants in my shade garden?

Yes! Most tropical plants grown as houseplants are native to the shady understory of tropical forests. Their tolerance of low light levels is what makes them good houseplants and can also make them a great way to brighten shady garden areas. Houseplants can be treated just like annuals; purchased from garden centers in spring, planted in the garden and allowed to be killed by frost in fall. Established houseplants from indoors can be moved to full or part shade locations after the danger of frost has passed. Be sure to acclimate the plant to the new light conditions outdoors by transitioning them to more light slowly over seven to 10 days. Bring the houseplant back indoors in the fall once nighttime temperatures start to dip below 50 Fahrenheit at night. Houseplants that are good to grow as annuals in the shade garden include, Boston fern (*Nephrolepis*), pothos (*Epipremnum aurcum*), rex begonia (*Begonia*), philodendron (*Philodendron*), Swiss cheese plant (*Monstera*), cast iron plant (*Aspidistra elatior*), dumbcane (*Dieffenbachia*), peperomia (*Peperomia*), arrowhead vine (*Syngonium podophyllum*), inch plant (*Tradescantia, Zebrina*), maiden hair fern (*Adiantum*), holly fern, (*Cyrtomium falcatum*), spider plant (*Chlorophytum comosum*), Swedish ivy (*Plectranthus*), aluminum plant (*Pilea*) and snake plant (*Dracaena trifasciata*syn. *Sansevieria*).



Floral Arranging Workshop

Wednesday, June 1st

6 PM to 7:30 PM

Muscatine County Extension Office

Join the Muscatine County Master Gardeners for a night of floral arranging. Using seasonal flowers and fillers, Dan Brabec, Assistant Professor at Iowa State University, will lead the class through a step-by-step tutorial to help you create your best floral arrangements ever.

Registration is required, florals and vase included with \$30 registration fee.

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Publications Highlight Various Perennials and Annuals to Enjoy



AMES, Iowa – Ranging from zinnias to African violets to outdoor perennials, several newly updated publications from Iowa State University Extension and Outreach horticulture specialist Cynthia Haynes address advice for optimal success in the garden.

For those looking to stay indoors, [a publication regarding African violets](#) is an excellent choice. "African violets are one of America's most popular houseplants and can bloom almost continuously under the proper growing conditions indoors," explained Haynes.

These bright and colorful houseplants are frequently available at grocery stores and garden centers, and come in a wide variety of colors, petal shapes, sizes and leaf forms and patterns.

"They are relatively easy to grow, but require consistent care," added Haynes.

As for those hoping to venture out into the garden, [zinnias are great options](#). Zinnias are one of the easiest annuals to grow from seed and should bloom 8-12 weeks after sowing. A wide variety of brightly colored flowers are commercially available, and they are easy to grow and keep beautiful.

[Annual vines are also a great garden option](#), especially for concealing otherwise hard to hide areas in the garden, such as fences and walls. "Vines are ideal for creating a temporary, natural screen for privacy or against sun, wind or unattractive views," said Haynes. "They also can create a welcoming habitat for small birds."

Finally, for those planning ahead for later in the season, two new publications offer advice for late-season gardening. One outlines several attractive additions to a late-season garden, including Salvia, Goldenrod and New York aster. The other offers advice for growing and overwintering tender perennials, which must be dug in the fall and stored indoors during the harsh Iowa winter. "[Late Season Perennial Flowers](#)" and "[Growing and Overwintering Tender Perennials](#)" are both available for free on the extension store website.

Other publications offering gardening advice can also be found on the [Iowa State University Extension Store](#).