

Regulatory Services News

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Feed - Fertilizer - Milk - Seed - Seed Testing - Soil Testing
Ag Lime Testing - Industrial Hemp Testing

Summer 2023

Director's Digest

Generational Differences

I've always been interested in the differences between generations and how they approach decision making. Being a baby-boomer with two millennial children, I've had them look at me several times and say "c'mon boomer". Now I have 3 granddaughters who I have recently learned are part of Generation A.

Knowing the differences in how generations make decisions is important for marketing and for hiring and retaining employees.

Generations are generally broken into 15-to-20-year increments. According to the KASASA exchange there are currently 5 generations that encompass the majority of the population as shown below:

Generation Name	Years Born	Current Age	Population Size	Shaping Events
Baby Boomers	1946-1964	57 to 75	71.6 million	Post WWII optimism, the cold war, and the hippie movement.
Generation X	1965 to 1979/80	41 to 56	65.2 million	End of the cold war, the rise of personal computing, and feeling lost between two huge generations.
Millennials (Gen Y)	1980 to 1994/96	25 to 40	72.1 million	The Great Recession, the technological explosion of the internet, social media,
Generation Z	1997 to 2012	9 to 24	68 million	Smartphones, social media, never knowing a country not at war, and seeing the financial struggles of their parents (Gen X)
Generation A	2012 to 2025	0 to 11	48 million	Global pandemic, social justice movement

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Director's Digest, continued

There has been lots of discussion on dealing with Millennials but we now have members of Generation Z becoming entrepreneurs, consumers, and entering the job market. Keep in mind this is the first generation that has never known life without a smartphone. The Center for Food Integrity (CFI) recently released a report on “Engaging Gen Z” and points out that they are poised to change the face of the food industry. Generation Z currently accounts for 20.67% of U.S. consumers and are nearly one-third of the global population. Their economic power is the fastest growing across all generations. It is important to learn how to engage with them if you want them to be your customers or work for your business.

I admit that I still receive a local newspaper and still have subscriptions to a few magazines. Gen Z's do not receive news and information from these sources. CFI offers the following snapshot of Gen Z:

- 98% worldwide have a smartphone
- Have an 8-second attention span
- Nearly half of Gen Z adults spend more than 3 hours on social media each day
- 52% use messaging apps for more than 3 hours per day
- 42% spend 3 or more hours daily playing games
- Less likely to drop out of high school and more likely to be enrolled in college
- 35% shop online for groceries at least once a week and more than half are label readers
- 53% say they find food inspiration on Tik Tok

Whether you consider these traits good or bad, you have to admit that engaging with this generation must be done differently if it is to be effective. Social media is a big part of their life. 97% of all Gen Z learn about new products from social media.

When I think of social media, Facebook and Twitter come to my mind but these are the least used social media sites for Gen Z. Preferred channels that they use at least once per day are YouTube (75%), Tik-Tok (59%), Instagram (59%), Snapchat (48%), Facebook (43%), and Twitter (34%).

As you might guess from their high use of YouTube, Gen Z'ers have an affinity for how-to videos and vlogs. Research shows they are just as likely to watch a 20+-minute video as they are a <4-minute video. If we want to educate them on farming and farming practices, we need to consider using educational videos. I've always been a person that wanted to know the science behind a fact (Mr. Spock was my hero on Star Trek) but it's not advisable to start a conversation with a Gen Z person with facts. You must first earn their trust. CFI found that in food-related conversations with consumers, shared values are 3 to 5 times more important to earning trust than simply sharing facts. Consumers want to know that those involved in agriculture and food production share their values for topics like safe food, high standards of animal care and environmental stewardship.

Most Gen Z's are far removed from the farm but are interested in where their food comes from. CFI brought together three Gen Z food consumer influencers and three Gen Z farmer influencers on a tour to explore beef sustainability – both production and nutrition in San Antonio, Texas. They met with experts including cattle ranchers, a registered dietitian, a veterinarian, and a chef. Videos of this tour are available on the CFI website. The participants were given a survey before and after the tour (scale of 1-10 with 10 being the best score) and demonstrated that hands-on experiences and authentic, values-based conversations can help earn trust and shift opinions as shown in the table below:

Statement	Pre-Survey	Post-survey
Beef is sustainably produced	6.8	8.6
Beef is a healthy, sustainable option for my diet	7.8	8.8
Farmers care and implement sustainable practices on their farms	7	9
How sustainable are today's farms	5.25	8.6

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Director's Digest, continued

To me, this reinforces the statement that “people don’t care what you know until they know that you care.” Videos, company tours, and on-farm demonstrations are effective with Generation Z if we can show them we are producing safe, healthy food in a sustainable manner.

Hiring Generation Z

We have all struggled with hiring and retaining employees since the pandemic. Gen Z employees have a specific set of expectations that should change the way we recruit, hire, and retain. Gen Z wants meaningful mission-driven work that makes a difference. They rank job duties and responsibilities higher than any other generation when it comes to accepting or rejecting a job offer. 37% of Gen Z’s said they have rejected a job and/or assignment based on personal ethics.

Gen Z’s want to have a voice in the workplace. They want to be involved in decision making and will stay longer if given the opportunity to provide input and given opportunities to grow through training and promotions. Those who feel they’re being heard are more loyal with 66% saying they’d stay beyond five years. That compares with 24% who don’t feel heard.

If feasible, they also want flexibility in their work schedules, including remote and hybrid work, to allow for a good work/life balance. The pandemic has taught us this is feasible with many positions. It’s not what my generation is used to but we have seen it work well with certain positions in our office.

Certainly, they want the latest technology to complete their jobs. This includes hardware, software and platforms that allow them to work efficiently and communicate effectively.

It’s hard for some of us old dogs to learn new tricks but each generation is different in how they view life. If we want Gen Z’s to be our customers and employees, we must learn to engage with them in ways that are meaningful to them. I’ve only provided a brief summary of this excellent study from the Center for Food Integrity. You can learn more about this study at: [Engaging Gen Z to Earn Trust - The Center for Food Integrity](#)

*Dr. Darrell D. Johnson,
Executive Director*

Seed Service Lab News

With the warmer temperatures over the last several weeks making it feel more like mid-June rather than late-April, most of us are out working in the garden, prepping ground and even planting some early crops. Even though the last frost is projected to be a few weeks out, many farmers and businesses across the state have already sent several hundred seed samples to the laboratory for analysis, keeping us quite busy this spring season.

Most seedsman and businesses send in their samples via the mail or other carrier service, but samples can also be dropped off at our Lexington lab during normal business hours Monday through Friday. Your seed sample should be submitted in a seed envelope (preferred method), or a secure container along with a sample submittal form. Seed envelopes can be obtained by contacting the seed program via email or phone and either picked up or mailed to the desired address at no cost. The envelopes come preprinted with our return address as well as spaces for the necessary sample information. If using another container, the sample submittal form can be found on our departmental website here <https://www.rs.uky.edu/regulatory/seed/service.php> . The seed laboratory can also provide the form if necessary upon your arrival.

It is very important whether using one of our seed envelopes or completing a submittal form to fill out as much information as possible. This ensures that the laboratory conducts all the desired tests, your report of analysis has all the necessary sample identifiers, and that it is sent to the correct individual(s) in a timely fashion. In addition to proper analysis and reporting, having complete and up to date contact information on file makes it easier for billing purposes as well as contacting you once your sample has been received if we have any questions or updates. Many customers have taken advantage of creating an online account where they can log in and update contact information as needed as well as view lab results as they become available.

Just as important as having all the necessary sample submittal information, is providing us with enough seed to conduct the necessary test(s).

Several times this spring, we have received seed samples that do not meet the minimum required amounts for testing. Unfortunately, when this happens samples have to be resubmitted, resulting in a delay of often multiple weeks in obtaining test results from the lab.

For more information about seed testing, please visit our departmental homepage <https://www.rs.uky.edu/home/>. From there you can navigate to the seed section where you will find information on our service testing program. We have created various sections providing guidance on seed sample submittal, information on packaging and shipment as well as crop groups and suggested amounts of seed to submit for analysis.

If you have additional questions regarding these topics or any other seed related inquiries, you are encouraged to contact the seed program directly at seed.program@uky.edu or call the seed office at (859) 218-2468.

*Jonathan Collett,
Seed Laboratory Supervisor*

Kentucky Feed Meeting Review

A state-wide feed meeting was held on March 14, 2023, hosted by the Feed Program of University of Kentucky Division of Regulatory Services. We held this as a hybrid meeting with in-person attendees and the opportunity to participate virtually through Zoom. Between in-person and Zoom participants, 24 industry representatives and 14 UKDRS personnel attended the meeting.

Dr. Darrell Johnson, our Executive Director, opened the program with review of Regulatory Services responsibilities and the multiple regulatory areas we cover. He also discussed our inspection staff and our two newest inspectors, Alysia Conner and Daryl Derossett.

Jenny Combs, our AFRPS Coordinator, reviewed our involvement in the Animal Feed Regulatory Program Standards. One of the goals of AFRPS is to promote a uniform and consistent approach to feed regulation. For firms doing business in multiple states, inconsistency in feed regulation can be a barrier to business. We are currently in our ninth year

of participation and our program achieved full implementation of all 11 standards in 2019. We are now near the end of our 2nd year in the maintenance phase of the program. We received additional funds this year to focus on Preventative Controls implementation within the state. Jenny discussed how our participation in AFRPS has improved our program by building a framework and expanding capabilities to better serve our Kentucky feed industry. To date, we have received grants from FDA totaling \$3.745 million with the university receiving \$659,000 of this total.

Kristen Green, our Registration Specialist, discussed several topics related to labeling and registration. This summer, AAFCO (Association of American Feed Control Officials) members will vote on new model regulations that will dramatically change pet food labels. The Pet Food Label Modernization Project (PLFM) started in 2015 and its goal is to enhance consumer understanding of pet food labels with a format that more resembles human food labeling. If the new regulations are approved, we expect that an implementation period (5 years?) will be suggested to allow the industry time to adjust. Our division would likely update our regulations in 2024. Kristen also reviewed AAFCO name changes for corn gluten feed and corn gluten meal. The replacing of “gluten” by “protein” was supported by the industry. Lastly, she mentioned the FDA’s decision to use the phrase “animal food” instead of “animal feed”. Our feed program will continue to use “animal feed” and no change in feed law or regulation is planned to align with the FDA on this topic.

I presented information on feed tonnage, feed sampling trends and feed mill inspections under our FDA contract. The last 5 years of feed tonnage reported for ingredients shows that distribution of corn, brewery, and distillery products have increased while distribution of soybean products has decreased. Over the same time period, feed tonnage reported for commercial feeds shows that distribution of poultry, beef, horse, and deer product have increased while distribution of dairy and swine feed has decreased. Our income from feed tonnage and registration has steadily increased with a total increase of nearly 30% in the last 10 years. One of the interesting trends with feed sampling is the decrease in medicated feeds

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Feed Meeting, continued

sampled after the VFD rule changes took effect at the beginning of 2017. We sampled 301 medicated samples in 2016 and 202 in 2022. Most of the decrease can be explained by fewer products with chlortetracycline being available to sample.

Regarding our FDA inspection contract, changes over the past 5 years in both total inspections and inspection types are a direct result of new Food Safety Modernization Act (FSMA) regulations. For the last two years, we've conducted inspections at 32 firms per fiscal year. All manufacturing firms are now inspected for compliance with the cGMP regulations under Part 507 with 12 of these firms also under the more extensive preventative control and hazard analysis regulations. Of the 141 KY manufacturers eligible for a Part 507 cGMP inspection, 117 have been inspected at least once under these regulations. Of the estimated 52 KY manufacturers that also fall under the PC regulations, 28 have been inspected in the past 3 years. Our focus on completing inspections at all KY manufacturing firms will continue and we do not expect any major changes in our contract with FDA for the next 3 years.

Lastly, we discussed the December 2022 acceptance of hempseed meal and hempseed oil in diets of chickens and equine through a self-affirmed GRAS (generally recognized as safe) petition. To date, there have been no additional self-affirmed GRAS proposals and we are not aware of either ingredient actually being included in diets of chickens and horses in Kentucky.

We thank all of you that participated in this meeting and appreciated the comments and feedback provided by the industry. We are reviewing the requests for information and training received and making decisions on how best to fulfill these requests.

*Dr. Alan Harrison,
Director Feed and Milk Programs*

Regulatory Services required to collect Sales Tax

2022 Kentucky legislation in House Bill 8 makes substantial changes to how various services are taxed within the state. In the area of sales and use

tax, thirty-four (34) additional service categories become subject to tax. Businesses that provide these services are required to collect the 6% sales tax from their customers for providing these services. The bill also creates and/or amends several sales and use tax exemptions. [2022-23 Changes to Sales Tax on Services - TAXANSWERS \(ky.gov\)](https://taxanswers.ky.gov)

It has been decided that we will now have to charge sales tax on **all** services we perform at the Division of Regulatory Services unless the entity we are invoicing has a sales tax exemption form on file with us. If you will be using any of our services and have a state sales tax exemption form, please email it to me at darrell.johnson@uky.edu as soon as possible. Unfortunately, the farm exemption certificate that many of us have does not apply to taxes on services.

*Dr. Darrell D. Johnson,
Executive Director*

H.R. 1472 – Plant Biostimulant Act

In early March of this year a Bill to amend the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) was introduced to the 118th Congress by Mr. Braun and Mr. Padilla. Under this bill plant biostimulants would not be subject to FIFRA regulations. They also define Plant Biostimulant, Nutritional Chemical and Vitamin Hormone Product.

PLANT BIOSTIMULANT.—The term ‘plant biostimulant’ means a substance, micro-organism, or mixture thereof, that, when applied to seeds, plants, the rhizosphere, soil, or other growth media, act to support a plant’s natural processes independently of the biostimulant’s nutrient content, thereby improving nutrient availability, uptake or use efficiency, tolerance to abiotic stress, and consequent growth, development, quality, or yield.

NUTRITIONAL CHEMICAL.—The term ‘nutritional chemical’— (1) means a compound or mixture that interacts with plant nutrients in a manner which improves nutrient availability or aids the plant in acquiring or utilizing plant nutrients; and (2) includes some plant biostimulants.

VITAMIN HORMONE PRODUCT.—The term ‘vitamin hormone product’ means a product consisting of a mixture of plant hormones, plant nutrients, inoculants, or soil amendments.

The last section of the bill includes a soil health study to assess the types and use practices of biostimulants to look at the following.

- Increasing organic matter content.
- Reducing atmospheric volatilization.
- Promotion of nutrient management practices.
- Limiting or eliminating runoff or leaching of soil or nutrients such as phosphorus and nitrogen into groundwater or other water sources.
- Restoring beneficial bioactivity or healthy nutrients to the soil.
- Aiding in carbon sequestration, nutrient use efficiency, and other climate-related benefits.
- Supporting innovative approaches to improving agricultural sustainability, including the adoption of performance-based outcome standards and criteria.

A full version of the bill can be found at the following link: [BILLS-118s802is.pdf \(govinfo.gov\)](https://www.govinfo.gov/bills/118/s802is.pdf)

*Steve McMurray,
Director of Fertilizer and Seed Programs*

Updated Program Generating Soil Reports

Soil testing is one of the most recognized services offered by County Extension Offices. The laboratories in our Division support this service to Kentucky producers and homeowners and we continually look for where improvements can be made in providing this valued service.

A 22-year old program county extension offices use to generate soil test reports will soon be replaced. An updated web-based program is currently being tested in 22 counties with full release to all counties scheduled for late summer. The new program takes advantage of recent developments in using the web as an interface for user interaction. County offices will be able to send reports to clients via email or postal mail. Clients will also be able to

access reports on the web.

The reports generated from the new program will have a new look as shown in the example on page 8. The main table will have lab results, sufficiency bars in color, and fertilizer and lime recommendations. The program gives extension agents the ability to add their own specific comments and recommendations that will appear at the bottom of the main table. If a change occurs with the crop to be grown, the program provides greater flexibility to generate another report based on the different crop.

This program is a major upgrade for how county offices will manage soil reports. Greater versatility with the web-based design will allow continual updates and improvements to be made for several years into the future.

*Dr. Frank Sikora,
Director of Laboratories*

Upcoming Meetings

Association of American Feed Control Officials (AAFCO) Annual Meeting

Renaissance Baltimore Harborplace Hotel

July 30 –August 2

[Annual - AAFCO](#)

Association of American Plant Food Control Officials (AAPFCO) Annual Meeting

Renaissance Baltimore Harborplace Hotel

August 3-4

[AAPFCO Meetings](#)

Whitley Cooperative Extension Office
 PO Box 328, 4275 N. Hwy 25
 Williamsburg
 (606) 549-1430



Soil Test Report
 3/22/2023

REPORT TYPE: A	Client Name
LAB NUM: SL-23-12321	Address
CO NUM: 01511	City, KY Zip Code
ACRES:	Phone Number

OWNER SAMPLE ID: 1

AGRICULTURE CROP INFORMATION:

. . . CROP: Cool Season Grass . . . MANAGEMENT: Annual Top Dressing . . . USE: Pasture

Determination	Result	V Low	Low	Med	High	V High	Recommendation	
Soil pH	5	[Red bar]					see below	
Nitrogen							see comments below	
Phosphorus	21 lbs/acre	[Red bar]					90 lb P205/ac	
Potassium	217 lbs/acre	[Yellow bar]					30 lb K20/ac	
Calcium	1046 lbs/acre	[Green bar]						
Magnesium	130 lbs/acre	[Green bar]					None	
Zinc	0.9 lbs/acre	[Green bar]					None	
Cation Exchange Capacity	13 meq/100g	Typical for KY which is 11 to 19 meq/100g						
Cation Saturation	>>>>>	2% K, 20% Ca, 4% Mg, 26% total bases						

Soil pH Recommendation:

2.75 tons/ac of 100% effective lime is required. Adjust lime rate based on RNV of lime which can be obtained at www.rs.uky.edu/soil/technical_info/index.php.

Comments:

Levels denote probabilities for a crop response to fertilizer or lime. Very Low or Low denotes high probability; Medium denotes slight probability; High or Very High denotes minimal probability. Amount of fertilizer needed depends on concentration of nutrients in fertilizer. Soil pH is calculated from 1 M KCl soil pH using: $0.91 \times 1 \text{ M KCl soil pH} + 1.34$. Lime quality is defined by relative neutralizing value (RNV). RNVs for ag lime are presented at www.rs.uky.edu/soil/technical_info/. Sikora-2 buffer pH of 6.3 was used to determine lime rate. Nitrogen recommendations are based on field trials conducted by UK specialists. Nitrogen is not tested in soil since it is present in organic matter and the amount made available to plants through microbial activity is difficult to test.

Personnel News



We are happy to welcome Lee Ladd back to our staff at Princeton. Lee had worked with us as a temporary employee in 2021 while we were setting up to run plant tissue analysis. Unfortunately, the tornado in December 2021 destroyed our lab and we were no longer able to perform this test. Lee had been working with the farm crew at Princeton since January 2022 helping with the tornado cleanup. He rejoined our soils crew at Princeton in April as we prepare to move into our temporary lab facility. Lee lives in Princeton and has a lot of experience that will be beneficial to our team.

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