

QUARTER 2

VOLUME 22

ISSUE 2

Field Journal

The Official Publication of the Colorado Corn Administrative Committee

**CCAC NEWS
CORN INDUSTRY NEWS
EXPORT UPDATES**

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ABOUT

Field Journal is a publication of the Colorado Corn Administrative Committee (CCAC). The CCAC is funded by a penny per bushel assessment, and focuses on market development, research, regulatory affairs, providing outreach/education to consumers and elected officials, and promoting Colorado corn for the benefit of all corn producers in the state. ©2022

MAGAZINE

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COVER
Even though many producers were behind in planting this season's crop, corn on the front range is growing well at the end of June 2022. Photo by Robyn Carlson.

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FROM THE EXECUTIVE DIRECTOR

NICHOLAS COLGLAZIER

*A Step Forward for All Colorado
Corn Producers*



The 35th President of the United States, John F. Kennedy, once said: *“Change is the law of life, and those who look only to the past and present are certain to miss the future.”*

Your Colorado Corn Administrative Committee Board of Directors has taken this quote to heart, and over the past year has been working to develop a 5-year strategic plan that speaks to what matters most to Colorado producers like you: ensuring this organization and industry are poised to take on the future.

I know I’m excited about the strategic vision our Board has crafted on behalf of corn producers across the state, and look forward to what’s ahead — as President Kennedy said — the future is something we don’t want to miss.

As you may have noticed, this publication’s name has recently changed. It will still bring you the same great content, but it will just look a little different moving forward. This change is an example of a series of intentional shifts that we’re making as we begin

implementing tactics from our strategic plan.

Another shift you may have noticed in email communication is a recent request to the Commissioner of Agriculture to make modifications to our market order. The structural changes that have been recommended will make our operations more effective, efficient, and nimble, while at the same time, provide more opportunities for corn producer engagement in the work of the organization.

The Board is seeking the approval of three primary changes:

1. **Simplifying** the board structure
2. **Strengthening** the districts
3. **Extending** the length of board of director terms

Much time, effort, and thought have been put into these changes by the Board, and they are explained in more detail in this inaugural edition of the *Field Journal*.

Another change you’ll be seeing related to organizational structure, though not to the market order, is in the direction of our producer-led Action Teams. Action Teams

manage much of the specialized work of the organization (like research and market development), and moving forward, teams will expand to include topics such as sustainability. Action Teams will focus intently on including more producers outside of the Board.

We recognize the immense talent, knowledge and expertise of our local producers, and the Board wants to utilize this deep well of talent to the fullest potential to ensure our organization and industry won’t miss out on the future.

Stay tuned for future communication related to strategic plan details, and how YOU can plug in through Action Team engagement if you’re looking for a deeper and more meaningful way to connect with the work of the administrative committee!

I’m confident in the vision of the board and that it will provide a solid footing for the future, and hope you are as well. Please don’t hesitate to reach out to me directly with your questions, or your district board representative.

CCAC LEADERSHIP

BOARD OF DIRECTORS

PRESIDENT: Jeremy Fix
VICE PRESIDENT: Rod Hahn
SECRETARY: Josh Hasart
TREASURER: John Sullivan, Jr.

Position 1 Director: John Sullivan Jr.
Position 1 Alternate: Alex Eckhardt

Position 3 Director: Allyn Wind
Position 3 Alternate: Vacant

Position 4 Director: Bryan Hofmeister
Position 4 Alternate: Vacant

Position 5 Director: Rod Hahn
Position 5 Alternate: Nathan Weathers

Position 6 Director: Josh Hasart
Position 6 Alternate: Vacant

Position 7 Director: Justin Self
Position 7 Alternate: Rafe Schroder

Position 8 Director: Wayne Brew
Position 8 Alternate: Vacant

Position 9 Director: Jeremy Fix
Position 9 Alternate: Mike Lefever

Position 10 Alternate: Jessica Brophy
Position 10 Director: Roc Rutledge

Position 11 Director: Matt Mulch
Position 11 Alternate: Troy Schneider

ABOUT CCAC

The Colorado Corn Administrative Committee (CCAC) was established over thirty years ago to manage a one-penny-per-bushel assessment collected by first handlers of sales of corn in the state.

The CCAC continues to manage the investments of Colorado's corn check-off dollars. This allocation is allowed to be used specifically for research, market development, outreach and education on behalf of corn producers in the state.

The administrative committee board members are nominated by corn producers and appointed by the Commissioner of Agriculture.

ACTION TEAMS & COMMITTEES

RESEARCH ACTION TEAM

Wayne Brew (Chair), Alex Eckhardt, Dave Eckhardt, Rod Hahn, Josh Hasart, Lanny Huston, Troy Schneider, Bruce Unruh

MARKET DEVELOPMENT ACTION TEAM

Mike Lefever (Chair), Jessica Brophy, Jeremy Fix, Rod Hahn, Matt Mulch, Troy Schneider, Nathan Weathers, Randy Wenger

REGULATORY AFFAIRS COMMITTEE

Rod Hahn (Chair), Dave Eckhardt, Lila Hahn, Josh Hasart, Lanny Huston, Greg Larson

CCAC PARTNERS

AgTransportation Coalition

Agricultural Relations Council

Animal Agriculture Alliance

Clean Cities Coalitions

Colorado Ag Council

Colorado Agricultural Leadership Program

Colorado Department of Agriculture

Colorado FFA Foundation

Colorado Foundation for Agriculture

Colorado Livestock Association

CommonGround

National Agri-Marketing Association

National Association of Farm Broadcasters

National Corn Growers Association

U.S. Grains Council

U.S. Meat Export Federation

COMMITTEE REPORTS

MARKET DEVELOPMENT ACTION TEAM

MIKE LEFEVER - CHAIR

The Market Development Action Team discussed and/or approved the following items:

- E15/Look for the Blue Hose ads on iHeart Total Traffic and Weather Network.
 - This has been determined as one of the best places to reach the consumer - while they are driving!
- Social media campaign with KKTV in the Colorado Springs area promoting E15/Look for the Blue Hose. We are ramping this up for the summer driving season.
- Presented the USMEF with a check to help support their mission at the Colorado Livestock Association annual meeting.

RESEARCH ACTION TEAM

WAYNE BREW, CHAIR

The Research Action Team met on April 22, 2022, and discussed and/or approved the funding for the five projects submitted. Due to the reduced budget this year, four proposals were considered.

- Maintain membership in the Irrigation Innovation Consortium
 - This allows the CCAC to make recommendations and vote on potential research projects, nominate and elect members for the IIC executive committee. CCAC has funded this in the past.
- Ag Water Quality Program - Pollinator Habitats
 - The goal of the project is to preserve soil nutrients from irrigation and intense rainfall by planting pollinator strips on the edges of the fields. This will reduce runoff and increase the number of pollinators.
- Hydrogeology South Platte Salinity
 - In 2018, this project began to identify the causes of the salinity in the South Platte River Basin and how it is affecting agriculture.
- CSU Corn Hybrid test plots
 - There are several test plots around the state.

CSU will give an accurate unbiased report on which hybrids perform best. The results are found on the CSU crops testing web page.

NCGA QUARTERLY REPORT

TROY SCHNEIDER

The NCGA Representative discussed and/or approved the following items:

- April 13th, US Grains Council Middle East/Africa/South Asia A-Team virtual meeting. The MEA office provided an overview of the ongoing conflict in Ukraine as well as the implications that the Russian invasion will have across the Black Sea, as well as the MEA region more broadly (as well as globally), in relation to grain trade.
- April 14th, NCGA Market Development Action Team Monthly Meeting
- May 4th, KCNC CBS News Kelly Werthmann visited our farm to talk about the war in Ukraine and inflation and how both are affecting Colorado Agriculture. Kelly Werthmann reached out to the Colorado Department of Ag wanting to talk to colorado producers.
- May 12th, NCGA Corn Sustainability Advisory Group Virtual Meeting. We built a working timeline, and a workflow outlined with recommendations to take to the Corn Board in June for a clear path forward. We reviewed the U.S. Grains Council's Corn Sustainability Assurance Protocol. USGC is requesting comments during a 60-day public comment period.
- May 23rd, NCGA ARPA-E Energy Innovation Summit Denver on behalf of NCGA MDAT
- May 26th, NCGA Market Development Action Team Monthly Meeting
- June 3rd, Senator Bennet's round table with Ambassador Tai
- June 6th, NCGA FY 2023 MDAT Budget Presentation to the NCGA Finance Committee
- June 6th, NCGA Value Chain Stakeholder Virtual Meeting. The goal was to bring together stakeholders, including raw material providers, packaging manufacturers, and brand owners to determine the intersection of innovation

and market needs. Additionally, NCGA presented updated information to address some misconceptions regarding the sustainability of corn and agriculture in general. We heard from Walmart, YUM Brands, Tyson Foods, NatureWorks LLC, Bioastra Technologies Inc, Lygos, ADM, Novamont, World Centric, Mondi Group, Cargill, and USDA Rural Development. This meeting was hosted by NGCA and MDAT.

- June 7th, NCGA Corn Utilization and Technology Conference (CUTC), New Uses: Technology Advances and Emerging Markets for Corn Utilization. NCGA President Chris Edgington welcomed and kicked off the meeting. I followed President Edgington and walked everyone through the schedule of the day: Driving Innovation & Setting the Table for Good Policy. We had six-panel groups consisting of the following:

- Process Improvements in Wet Milling
- Changing Markets for Dry Grind Products
- Sustainable Aviation Fuel
- Policy to Support Renewables
- Financing Innovation
- Commercialization of Renewables.
- June 16th, NCBA Cattlemen's Call Podcast with Don Scheifelbien – NCBA President. We talked about sustainability and what it looks like in farming and ranching and the improvement in corn's sustainability as a major feed input. Other topics covered included high fertilizer prices, benefits from cover crops, and grazing of cover crops. We talked about how NCGA can engage with NCBA through the Cattlemen's Education Series, and what other partnership opportunities NCGA has to invest through the Market Development Action Team (MDAT).

SMART AGRICULTURE PRACTICES ENABLE A STRONG FUTURE FOR PRODUCERS

In Colorado, corn is among the most productive and profitable crops in the state. With drier conditions over the past year and high demand for corn to produce livestock feed, clean fuel, and a host of other products that make our everyday lives better, smart farming practices have increased in importance for this growing season.

Continued advancement of practices like cover-cropping and no-till farming, coupled with cutting-edge innovation within the industry, has assisted corn farmers in providing for

an ever-growing population while stewarding the land and conserving resources. These innovations allow producers to use smaller amounts of pesticides and less water to grow corn while increasing their crop yield.

Cover crops, such as ryegrass and wheat, are seeded by corn farmers in the fall to function as a shield and provide nutrients to the soil. Pairing this with no-till farming, a conservation practice where the soil remains untouched by tillage systems, helps regulate water usage, reduces erosion, improves soil health, and even

By CCAC Staff & Consultants

sequesters carbon. This has been quite beneficial for Colorado's corn farmers, particularly in drier areas.

Once cover crops are terminated in the spring and the excess plant material decomposes in the soil building organic matter and releasing nutrients for the crops, these farmers will utilize advanced irrigation systems to continue conserving water while maintaining a high yield. Many farmers have tapped into center-pivot sprinklers that use low-energy, precise application

(LEPA) systems, with a few even using drip irrigation for increased efficiency.

With an opportunity to now combine these irrigation systems with continually evolving technologies, farmers have more control and information regarding water usage and soil health than ever before. Water-flow meters for accurate measurements of irrigation, soil-moisture probes to measure the water usage of any given crop, and even drones for special imaging are just a few tools farmers now use to produce record yields while conserving resources.

In addition to innovative mechanical technology, corn farmers have now been equipped with safer and more targeted pesticides to produce corn safely and efficiently. Responsible application of these pesticides by farmers is crucial to the success of the overall crop yield, stewardship of resources, and affordability of food for consumers.

With more targeted pesticides that are used in lesser amounts, such as those used for seed treatments, farmers can produce more corn while reducing water, land, and fuel usage. Farmers can now produce the same amount of corn on fewer acres

by protecting crops from pests and fungi to ensure maximum productivity of farmland in a safe manner.

More efficient but shorter-lasting applications of herbicides also enable farmers to use water-saving and regenerative practices like no-till farming and cover crops because of the increased weed mitigation brought with them. As mentioned, no-till farming leaves the soil relatively untouched, which in addition to many other conservation benefits, also significantly reduces the amount of fuel needed to grow corn. According to the U.S. Department of Agriculture (USDA), no-till farming saves roughly 282 million gallons of diesel per year across the country.

Implementing these farming

practices right here in Colorado helps pave the way for increased sustainable corn production, and therefore a cleaner energy future. Ethanol, a high-octane, corn-based fuel that makes up at least 10 percent of almost all gasoline in the U.S., is cheaper, burns cleaner, and is renewable. Around 30 percent of the field corn grown in the nation is utilized to make this clean-burning renewable fuel, according to the National Corn Growers Association. Ethanol's by-products, such as dried distiller's grains with solubles, are then used as a highly nutritious ingredient in feed rations for livestock. It is a winning combination for your wallet, your car's engine, and the environment.

Given the circumstances of the day – rising food costs across the globe, the devastating Russian war against Ukraine, and COVID lockdowns in China all potentially impacting the global corn market – Colorado corn farmers' role in the world is more important than ever.

Corn has a wide range of uses and in Colorado it represents a sizable portion of the state's agricultural revenue. Conserving resources through innovative practices is a major priority for farmers and the success of this fall's harvest along with the efficient use of land and water starts with smart planning now.



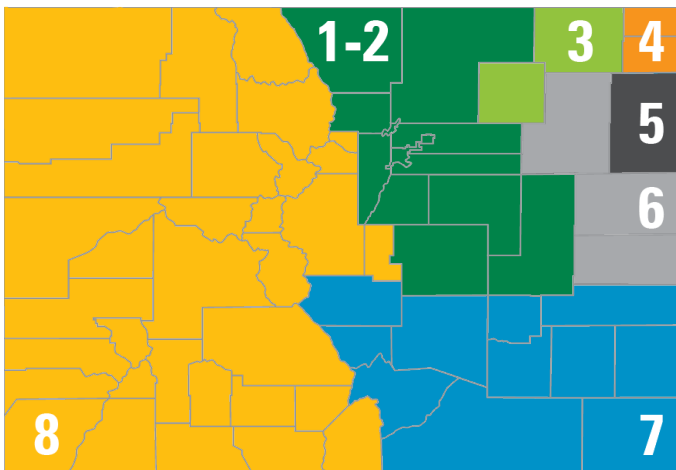
BOARD OF DIRECTORS RESTRUCTURING PROPOSAL

The Colorado Corn Administrative Committee Board of Directors has been hard at work over the last year completing an in-depth strategic plan to set the direction of the CCAC (see timeline on page 9). This has ultimately led them to recommend changes to the market order to the Commissioner of Agriculture.

These changes stem from the first core strategy, which is to re-define the CCAC mission, brand, and structure, so we can be an innovative, effective and nimble corn checkoff organization. The board has recommended three changes as structural steps to make the board more effective, cost-efficient, and producer focused.

To achieve these goals, the Board of Directors has recommended these changes to the Market Order:

1. Reduce the number of districts from 7 districts to 3 districts
2. Reduce the current board from 10 directors and 10 alternates to 7 directors and zero (0) alternates
3. Increase the tenure a director can serve from 2



Current District Structure

consecutive 3-year terms (6 consecutive years) to 3 consecutive 3-year terms (9 consecutive years).

Current District Structure

The map below to the left illustrates what the current district structure looks like.

Proposed District Structure

The map below to the right shows what the changes to the districts would look like. From the map you can see the three districts are geographically divided into:

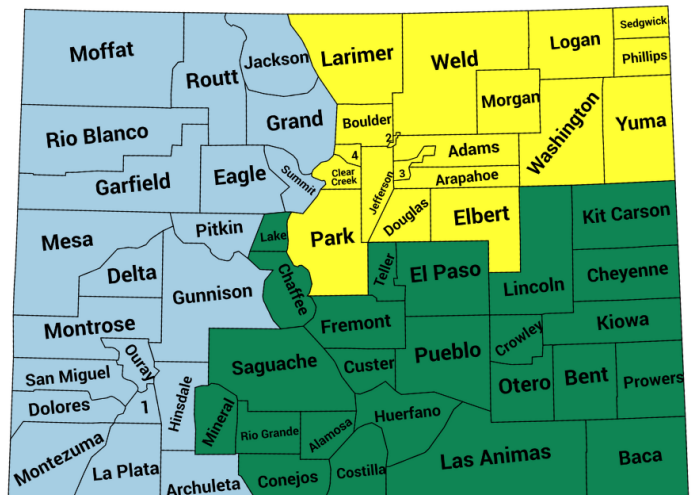
Northeast District (District 1) - 2 representatives

Southeast District (District 2) - 2 representatives

Western District (District 3) - 1 representative

At Large – 2 representatives from any district

District-based directors will be elected in-person at annual district meetings, and At-Large directors will be elected via secure online nomination and voting process.



Proposed District Structure

Board of Directors Breakdown:



The Board will also include three (3) or more non-voting advisory seats.

Opportunities

- Opens up meaningful opportunities for those willing to serve in many capacities (board of directors and action teams)
- Eliminates alternates, who have been an underused resource, and it has been difficult to find people willing to serve in these positions
- Simpler coordination of board meetings and district meetings
- More cost-effective as fewer producers are traveling
- Smaller board allows the organization to be more nimble and effective

Several of the current districts have seen challenges for many years in filling director and alternate

director positions, with the most recent board having four open alternate positions.

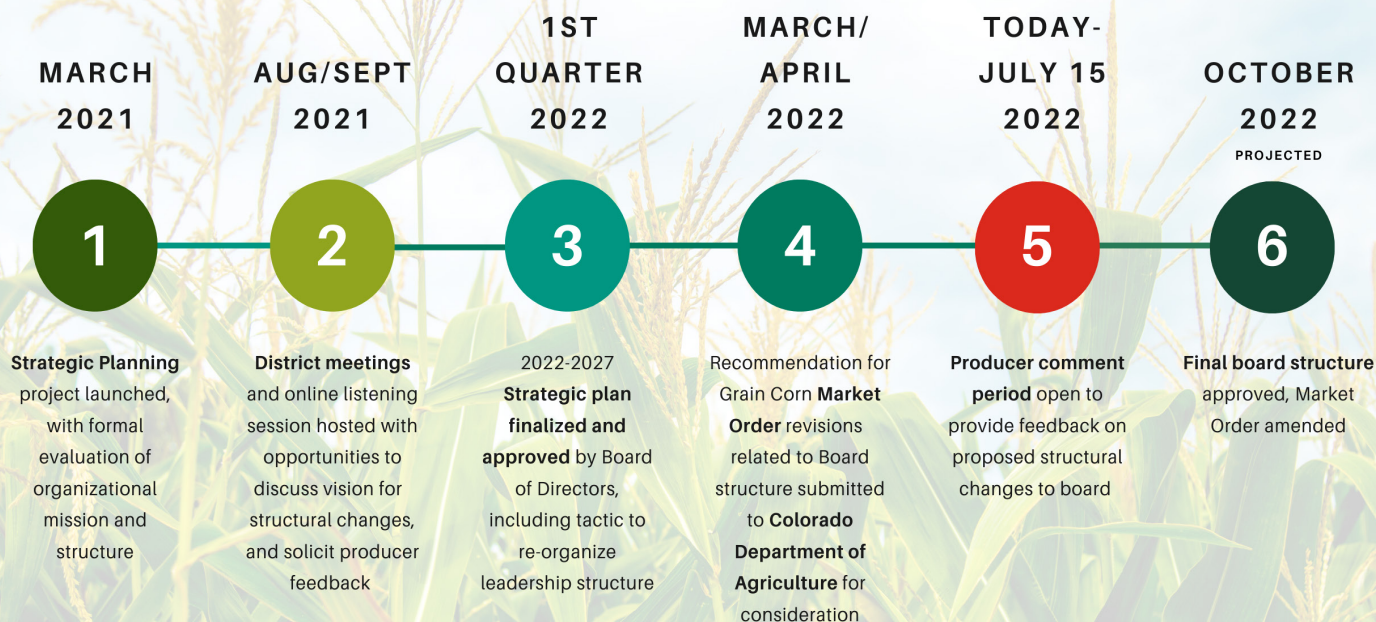
We understand these changes could present some challenges, such as needing multiple meetings per district since the district areas will be larger, and that has been accounted for.

In addition to these recommendations to the Commissioner, the board is providing additional opportunities for producers to participate and direct the organization and industry through its proposed Action Teams: Issues & Engagement, Market Development, Research, and Sustainability.

We want your feedback. Please submit your comments by July 15, 2022 at <https://bit.ly/boardstructurefeedback>

COLORADO CORN ADMIN COMMITTEE BOARD RESTRUCTURE TIMELINE

A brief history of evolution



INDUSTRY NEWS

CCAC'S SCHNEIDER & COLGLAZIER ATTEND AG TRADE ROUNDTABLE WITH AMBASSADOR TAI AND SENATOR BENNET

Colorado Corn Administrative Committee's Alternate Director Troy Schneider and Executive Director Nicholas Colglazier participated in an Agricultural Trade Roundtable with United States Trade Representative Ambassador Katherine Tai and Senator Michael Bennet on June 3, 2022. The meeting was hosted by the Colorado Department of Agriculture.

Ambassador Tai provided an outlook on the goals for trade set by the administration and talked about recent progress on the trade front. Tai spoke of the recent allowance of U.S. potatoes to be imported into Mexico, capping off a 15-year effort, and the recent revisions to an agreement making changes to Japan's safeguard on U.S. beef, making the safeguard less likely to be triggered. The meeting also offered participants the opportunity to ask the Ambassador questions on trade topics important to Colorado ag.

Colglazier was able to discuss Brazilian tariffs on ethanol, asking how the USTR is working to make the elimination permanent as well as building, maintaining, and defending global ethanol markets, allowing agriculture to be part of decarbonizing the transportation sector across the globe. The Ambassador hit on the many topics impacting global trade that ranged from COVID recovery, supply chain issues and the Russian war in Ukraine.

Ambassador Tai concluded that further trade progress will not be easy, but she believes that the United States is in a good position for success in the medium and long term. She is looking forward to continuing to listen to Colorado agricultural producers on the issue of trade, and how important it is to our farmers and rancher.



EXTENDED ACCESS TO HIGHER ETHANOL BLENDS WILL SAVE CONSUMERS MONEY AT THE GAS PUMP

A recent decision by the Biden administration to extend access to higher blends of ethanol through the summer month began on June 1, resulting in cost savings for Americans at the gas pump.



"Gas prices are taking their toll on Colorado families," said Colorado Corn Administrative Committee President Jeremy Fix. "Having access to higher levels of ethanol will save drivers money this summer."

Biden's action came after a 2021 court decision – resulting from oil industry efforts to limit the growth of higher ethanol blends – was set to end full-market access fuel with a 15% ethanol blend this summer.

Ethanol has been priced at least 80 cents less per gallon than unblended gasoline at wholesale throughout the spring, and drivers currently save up to 20 cents or more per gallon where E15 is available. E15 is lower in carbon, tailpipe and evaporative emissions.

In 2019, the use of ethanol in gas reduced CO2-equivalent greenhouse gas emissions by 54.1 million metric tons—the equivalent of removing 11.5 million cars from the road for an entire year. Ethanol benefits consumers and their vehicles, our environment, rural communities, and our country's economy.

Drivers can find retail fuel locations in Colorado that offer E15 and learn more about the benefits of E15 at www.lookforthebluehose.com.

EMERGENCY RELIEF PROGRAM - DISASTER RECOVERY ASSISTANCE FOR COMMODITY AND SPECIALTY CROP PRODUCERS

To help agricultural producers offset the impacts of natural disasters in 2020 and 2021, Congress included emergency relief funding in the Extending Government Funding and

Delivering Emergency Assistance Act (P.L. 117-43). This law targets at least \$750 million for livestock producers impacted by drought or wildfires.

USDA is working diligently to develop the programs, policies and provisions required to equitably distribute these much-needed payments to producers hard-hit by catastrophic disaster events over the past two years. Through proactive communication and outreach, USDA will keep producers and stakeholders informed as program details are available.

Funds will be distributed in two phases through the Emergency Livestock Relief Program (ELRP) and the Emergency Relief Program (ERP). For more details, please visit <https://www.fsa.usda.gov/programs-and-services/emergency-relief/index>.

CALLING ALL PHOTOGRAPHERS: THE FIELDS-OF-CORN PHOTO CONTEST IS OFFICIALLY OPEN!

The National Corn Growers Association (NCGA) Fields-of-Corn.com photo contest is now open and accepting entries for the 2022 contest. Since the beginning of the contest in 2014, nearly 3,000 pictures have been submitted across the various categories. This year a new category, Farm Babies, has been added.

A total of 26 cash prizes will be awarded, with the single, most popular photo with Facebook “likes” receiving a \$500 prize and First (\$300), Second (\$200) and Third (\$100) prizes will be awarded for each of eight categories and, as in prior years, judges will select a single Grand Prize winner to be awarded \$500. Stacey Poland and Ryan Kanode from Colorado were winners in last year’s contest.

Open to all, entries will be accepted through November 30 and will be available to accumulate Facebook “likes” through December 31. Winners will be announced in January 2023. Please visit <https://www.fields-of-corn.com/> to enter.

USDA TO ALLOW PRODUCERS TO REQUEST VOLUNTARY TERMINATION OF CONSERVATION RESERVE PROGRAM CONTRACT

The U.S. Department of Agriculture (USDA) will allow Conservation Reserve Program (CRP) participants who are in the final year of their CRP contract to request voluntary termination of their CRP contract following the end of the primary nesting season for fiscal year 2022. Participants

approved for this one-time, voluntary termination will not have to repay rental payments, a flexibility implemented this year to help mitigate the global food supply challenges caused by the Russian invasion of Ukraine and other factors. USDA also announced additional flexibilities for the Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP).

FSA is mailing letters to producers with expiring acres that detail this flexibility and share other options, such as re-enrolling sensitive acres in the CRP Continuous signup and considering growing organic crops. Producers will be asked to make the request for voluntary termination in writing through their local USDA Service Center.

If approved for voluntary termination, preparations can occur after the conclusion of the primary nesting season. Producers will then be able to hay, graze, begin land preparation activities and plant a fall-seeded crop before October 1, 2022. For land in colder climates, this flexibility may allow for better establishment of a winter wheat crop or better prepare the land for spring planting.

FARMERS CAN'T FARM WITH ONE HAND TIED BEHIND THEIR BACKS, NCGA SAYS AFTER RULING ON FERTILIZERS

The U.S. Department of Commerce issued a final determination, saying that urea ammonium nitrate fertilizer exported to the U.S. was subsidized and sold at less than normal value in the U.S. market during its period of investigation.

While an important step in the process, the ruling will not on its own lead to the placement of duties on nitrogen fertilizers shipped into the country. The final stage in the process is expected later this summer when the U.S. International Trade Commission (ITC) makes a final ruling on the matter.

“Placing tariffs on nitrogen fertilizers will land yet another blow to farmers, who are already dealing with a host of issues,” said Brooke S. Appleton, vice president of public policy at the National Corn Growers Association. “Farming is hard enough in the current environment. Farmers can’t do what they do with one hand tied behind their backs. And actions like these, pushed by fertilizer companies, will tie the hands of farmers.”

NCGA spoke during the recent hearing held by ITC, telling commissioners that tariffs on nitrogen fertilizers will place an undue burden on farmers by creating additional fertilizer shortages and unwarranted price hikes.

2022 RENEWABLE FUEL VOLUME RULE WILL LOWER FUEL PRICES AND REDUCE GREENHOUSE GAS EMISSIONS

The final 2022 renewable fuel volumes released on June 3 by the U.S. Environmental Protection Agency will support access to higher blends of ethanol, saving consumers money at the pump and cutting greenhouse gas emissions.

For 2022, the final Renewable Fuel Standard (RFS) volume of 20.63 billion gallons includes an implied 15 billion gallons of ethanol, following the law. EPA also added a supplemental 250 million gallon requirement for 2022, responding to a 2017 Court decision finding EPA improperly waived past volumes. EPA finalized the delayed 2021 volume at 18.85 billion gallons, including an implied 13.79 billion gallons for ethanol, tracking retroactive renewable fuel consumption for the year.

In a separate action, EPA finalized the denial of 69 pending RFS exemption

petitions. Closing the books on RFS exemptions helps restore much-needed integrity to the forward-looking volumes set today.

“More ethanol in the fuel supply saves Americans money at the pump and lowers greenhouse gas emissions,” said National Corn Growers Association President Chris Edgington. “Higher renewable fuel volumes for this year, which will increase and diversify our fuel supply, come at a crucial time as policymakers are working to lower fuel prices.”

Ethanol is priced \$1.42 less per gallon than unblended gasoline at wholesale today, and drivers currently save up to 20 cents or more per gallon where E15 is available. Ethanol reduces GHG emissions by 50% compared to gasoline and replaces the most toxic gasoline components to cut air pollution.

“When President Biden visited an Iowa ethanol production facility in April, he said ethanol reduces our reliance on foreign oil, creates choice and competition at the pump for better prices, creates good-paying jobs and reduces greenhouse gas emissions,” said Edgington. “Farmers agree, and the increased RFS volumes for 2022 and denial of pending refinery exemptions will advance these objectives and move renewable fuels forward.”

While Edgington praised EPA for the strong forward-looking 2022 renewable fuel volumes, he expressed disappointment the agency made an unnecessary retroactive reduction of 2020 RFS volumes. The RFS already self-adjusts for declining fuel use, such as occurred in 2020, and this further reduction rewards the use of more oil at the expense of the environment.



“More ethanol in the fuel supply saves Americans money at the pump and lowers greenhouse gas emissions. Higher renewable fuel volumes for this year, which will increase and diversify our fuel supply, come at a crucial time as policymakers are working to lower fuel prices.”

*-Chris Edgington
National Corn Growers Association President*

RED MEAT EXPORTS DELIVER VALUE BACK TO CORN AND SOYBEAN PRODUCERS

Record-level red meat exports of \$18.7 billion in 2021 had a major impact on the corn and soybean industries, according to an independent study by the Juday Group. The study quantified the returns that red meat exports brought to corn and soybean producers in 2021 nationally, and at state levels for leading corn-producing and soybean-producing states.

“The study validates the red meat industry’s collaborative approach to export market development,” says USMEF Chair-elect Dean Meyer, who produces corn, soybeans, cattle and hogs near Rock Rapids, Iowa. “Beef and pork exports drive value directly back to my farm and this study helps confirm the return on this investment for all corn and soybean producers.”

Corn and soybean growers support the international promotion of U.S. pork, beef and lamb by investing a portion of their checkoff dollars in market development efforts conducted by USMEF.

Key findings from the Juday Group study, which utilized 2021 export data, include:

- Nationally, beef and pork exports accounted for 537 million bushels of corn usage, equating to \$2.94 billion (at an average corn price of

\$5.48/bushel).

- Pork exports accounted for 99.3 million bushels of soybean usage nationwide (the equivalent of 2.36 million metric tons of soybean meal), which equated to \$1.3 billion (at an average soybean price of \$13.13/bushel).
- Beef and pork exports accounted for 3.4 million tons of DDGS usage, equating to \$716 million (at an average price of \$209.92/ton).

“The industry-wide collaboration to promote value-added U.S. red meat in international markets works to the benefit of the entire red meat industry,” says Mark Legan, a hog farmer from Coatesville, Ind., who serves on the

USMEF Executive Committee. “Red meat export growth results in greater demand for feed inputs and added value at every step of the supply chain. This study demonstrates the significance of global trade to the bottom line of American farmers and ranchers.”

Handouts detailing the impact of red meat exports at the national level and on the leading corn-producing and soybean-producing states are available from the USMEF website.

For questions or interviews on this topic, please email Rod Manuel or call 303-210-3501.

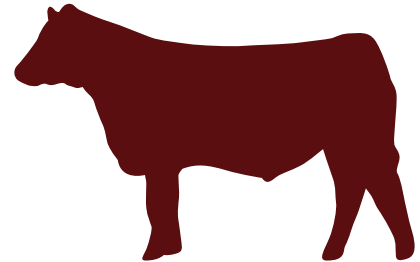
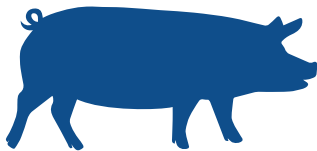


EXPORTING COLORADO CORN THROUGH U.S. BEEF AND PORK



In 2021, the market value of beef and pork exports to
Colorado Corn = \$31.8 million

(corn consumed by beef and pork exports at average corn price)
5.8 million bushels x \$5.48 per bushel



In 2021, the market value of beef and pork exports to
Colorado DDGS = \$5.7 million

(corn consumed by beef and pork exports at average DDGS price)
27,358 tons x \$209.92 per ton

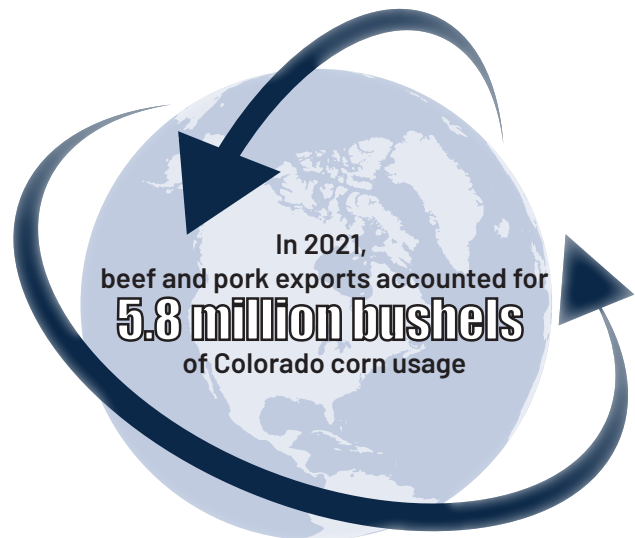


In 2021 beef and pork exports contributed
12% of bushel value = \$0.66
at an average price of \$5.48 per bushel

Beef and pork exports accounted for
3.4 million tons of DDGS in 2021

U.S. beef and pork exports contributed
\$85.14
per Colorado
corn acre

at \$0.66/bushel at a yield of
129 bushels/acre in 2021

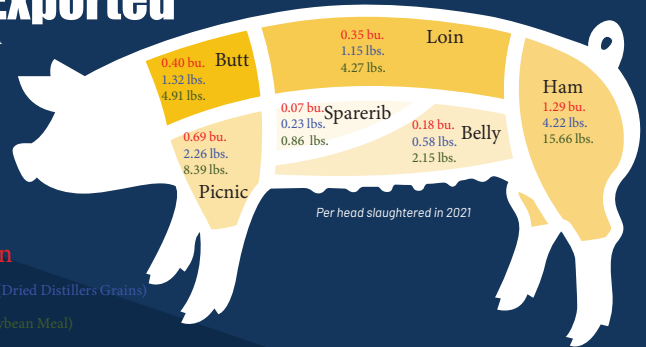
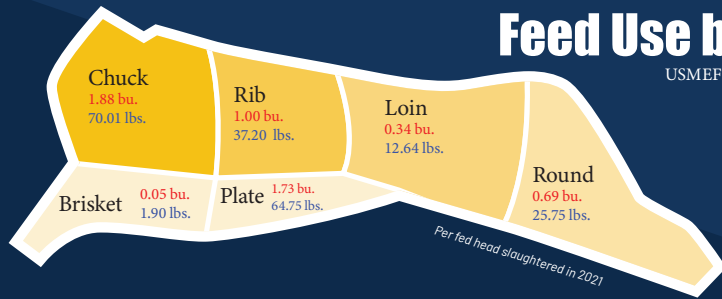


Beef and pork exports accounted for
537 million bushels
of U.S. corn in 2021

DDGS utilized by beef and pork
exports in 2021 represented about
\$0.03 per gallon
to the average gross margin of an ethanol mill

Feed Use by Cuts Exported

USMEF Estimates, WPI, USDA



Bushels of Corn

Lbs. of DDGS (Dried Distillers Grains)

Lbs. of SBM (Soybean Meal)

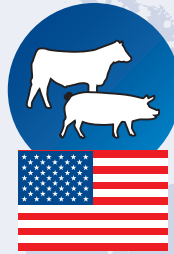


15% of U.S. beef production was exported, a new record



Beef export value equated to **\$407.22 per head** of fed cattle slaughtered in 2021, a new record
(export value divided by 2021 fed cattle slaughter)

In 2021

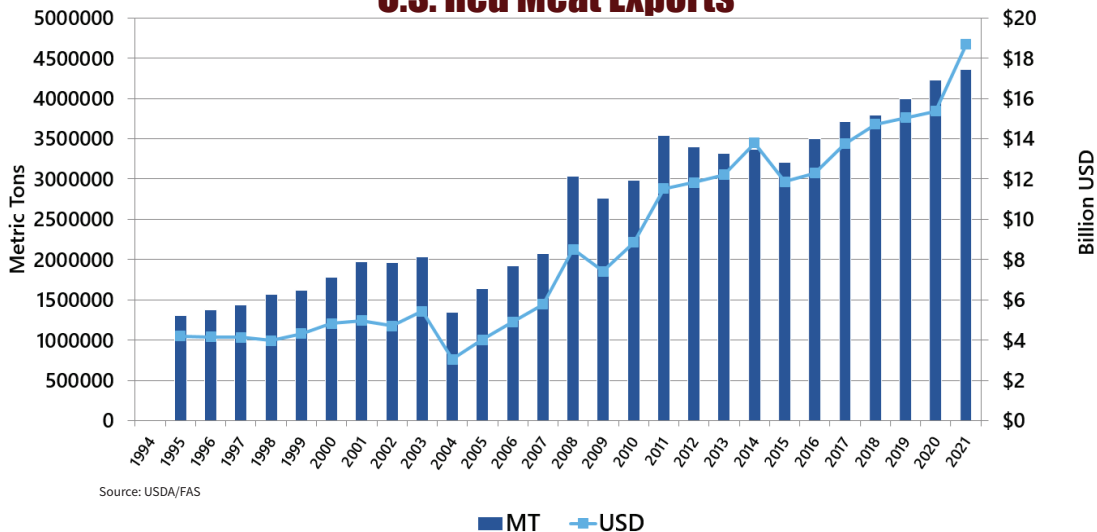


29.4% of U.S. pork production was exported, a new record



Pork export value equated to **\$62.86 per head** slaughtered in 2021, a new record
(export value divided by 2021 commercial hog slaughter)

U.S. Red Meat Exports



"The corn industry provides critical support for USMEF's efforts to expand global demand for U.S. red meat," says USMEF Senior Vice President of Industry Relations John Hinners. **"This study helps quantify the return on that investment."**



WORLD PERSPECTIVES
ATTENDING TO THE NEEDS OF POLICY & MARKETS
Dave Juday
dave@thejudaygroup.com

The U.S. Meat Export Federation (USMEF) is a non-profit trade association that works to create new opportunities and develop existing international markets for U.S. beef, pork and lamb. USMEF is a unique collaboration of nine distinct segments of American agriculture, joining together to implement successful marketing programs for U.S. pork, beef and lamb around the world.

U.S. Meat Export Federation
1660 Lincoln Street, Suite 2800
Denver, CO 80264
Tel 303.623.MEAT (6328)
Fax 303.623.0297
www.usmef.org



For more information about this independent study conducted by World Perspectives, contact John Hinners, Erin Borrer, Jessica Spreitzer or Dave Juday.

ANALYSIS SHOWS PUBLIC-PRIVATE AG MARKET DEVELOPMENT ADDS \$9.6 BILLION IN EXPORT VALUE ANNUALLY

Programs to help U.S. farmers build markets overseas boosted agricultural exports by an average of \$9.6 billion annually from 1977 to 2019, an annual lift of 13.7% in export revenues and returning \$24.5 for every dollar invested.

Those are the key conclusions from a new study prepared to evaluate the impact of programs administered by the U.S. Department of Agriculture's Foreign Agricultural Service (USDA's FAS), including the Market Access Program (MAP) and Foreign Market Development (FMD) program.

The U.S. Grains Council (USGC), the organization that builds markets overseas for feed grains and ethanol, led the study's preparation on behalf of FAS and the cooperator community.

"We were glad to participate in this effort to demonstrate the long-term impact of the programs that help our members expand markets and our customers build their operations and further serve their local consumers," said Ryan LeGrand, USGC president and CEO. "We know from our history that our work helps, as our mission says, improve lives. This study helps us

put numbers to those outcomes for our organization and our whole sector within the agriculture industry."

Developed by IHS Markit in cooperation with Dr. Gary Williams and Dr. Oral Capps at Texas A&M University, both experts on evaluating the economic performance of trade promotion programs, the study updated a 2016 edition also evaluating MAP and FMD, which are currently authorized by the 2018 Farm Bill. The new study also took a first look at the impact of investments through the Agricultural Trade Promotion (ATP) program.

The study's results supported the conclusions of prior studies of USDA export market development programs, finding they are "highly effective at generating an extremely high return on investment and account for a high percentage of the level of U.S. agricultural exports."

It reported that market development programs effectively leveraged cooperator and industry contributions, averaging between 70-77 percent of expenditures from 2013 to 2019, valued at an estimated

annual average of \$567 million.

Using econometric models to examine the impact of market development programs on bulk/intermediate and high-value commodity exports – including seafood, forest products and ethanol for the first time – the research generated results that were then used to assess the impact on the general economy.

Though not strictly comparable, reported results were similar and consistent with prior studies conducted since 2006 that suggested the program investments are highly effective.

The study found that from 2002 to 2019, market development investment:

- Increased farm cash receipts by \$12.2 billion (3.4 percent).
- Benefited the overall economy with an additional \$45 billion annually in economic output and \$22.3 billion annually in gross domestic product.
- Created an estimated 225,800 jobs across the entire economy.

The ATP program offered \$300 million to cooperating organizations, to which they added \$90 million in contributions of cash and goods and services, primarily from farmer organizations. Between 2019 and 2026, these cumulative investments are projected to generate:

- \$11.1 billion in additional agricultural export revenue, about \$1.4 billion annually.
- \$6.44 billion in farm cash receipts, about \$810 million annually.
- \$11.2 billion added to the U.S. GDP, about \$1.4 billion annually.

“The results of this work support the conclusions of previous studies showing USDA export market

“This study illustrates the reason we invest in organizations such as the U.S. Grains Council. They provide direct ROI to Colorado producers and our economy each and every year.”

*-Jeremy Fix
CCAC President*

development programs, into which both taxpayers and the ag industry invest, are highly effective at generating an extremely high return on investment and account for a high percentage of the level of U.S. agricultural exports despite the different analytical methods used, different time periods of the studies, and different data sets used in the various studies over the years,” Williams said.

MAP, FMD and ATP are Commodity Credit Corporation (CCC) programs administered by USDA’s FAS, which is required to evaluate programs for effectiveness.



A PROVEN PARTNERSHIP FOR U.S. AGRICULTURE



A PROVEN PARTNERSHIP FOR U.S. AGRICULTURE

MAP, FMD & INDUSTRY CONTRIBUTIONS HAVE

EXPORT IMPACT



\$9.6 BILLION

Export revenue increased by an average of **\$9.6 billion a year**, \$1.5 billion above the 2016 study level and total nearly \$414 billion from 1977 to 2019.



13.7% LIFT

\$9.6 billion translates into **13.7 percent of total ag exports** attributed to market development programs.



\$1 = \$24.5

Each dollar invested returned an average **\$24.5 from 1977-2019**, consistent with past studies and above the average BCR of about \$11 across a range of studies on commodity export promotion programs.



\$12.2 BILLION

to farm cash receipts.

MAP, FMD & INDUSTRY CONTRIBUTIONS MAKE

ECONOMIC IMPACT

The U.S. economy benefits from export development investment adding annually



\$45 BILLION

in economic output.



\$22.3 BILLION

to the U.S. gross domestic product.



\$11.7 BILLION

in labor income.



225,800 JOBS

average annual increase of jobs created.

ACROSS THE ENTIRE ECONOMY FROM 2002 TO 2019.

RANSOMWARE ATTACKS ON AGRICULTURAL COOPERATIVES POTENTIALLY TIMED TO CRITICAL SEASONS

The Federal Bureau of Investigation (FBI) is informing Food and Agriculture (FA) sector partners that ransomware actors may be more likely to attack agricultural cooperatives during critical planting and harvest seasons, disrupting operations, causing financial loss, and negatively impacting the food supply chain. The FBI noted ransomware attacks during these seasons against six grain cooperatives during the fall 2021 harvest and two attacks in early 2022 that could impact the summer season by disrupting the supply of seeds and fertilizer. Cyber actors may perceive cooperatives as lucrative targets with a willingness to pay due to the time-sensitive role they play in agricultural production. Although ransomware attacks against the entire farm-to-table spectrum of the FA sector occur on a regular basis, the number of cyber attacks against agricultural cooperatives during key seasons is notable.

According to a February 2022 Joint Cybersecurity Advisory authored by cybersecurity authorities in the United States, Australia, and the United Kingdom, ransomware tactics and techniques continued to evolve in 2021. Sophisticated, high-impact ransomware incidents against critical infrastructure organizations increased globally. The FBI, the Cybersecurity and Infrastructure Security Agency (CISA), and the National Security Agency (NSA) observed incidents involving ransomware against 14 of the

16 U.S. critical infrastructure sectors, including FA, the Defense Industrial Base, Emergency Services, Government Facilities, and Information Technology Sectors.

Threat

Since 2021, multiple agricultural cooperatives have been impacted by a variety of ransomware variants. Initial intrusion vectors included known but unpatched common vulnerabilities and exploits, as well as secondary infections from the exploitation of shared network resources or compromise of managed services. Production was impacted for some of the targeted entities, resulting in slower processing due to manual operations, while other targeted entities lost access to administrative functions such as websites and email but did not have production impacted.

Cyber actors may perceive cooperatives as lucrative targets with a willingness to pay due to the time-sensitive role they play in agricultural production.

A significant disruption of grain production could impact the entire food chain, since grain is not only consumed by humans but also used for animal feed. In addition, a significant disruption of grain and corn production could impact commodities trading and stocks. An attack that disrupts processing at a protein or dairy facility can quickly result in spoiled products and have cascading effects down to the farm level as animals cannot be processed.

- In March 2022, a multi-state grain company suffered a Lockbit 2.0 ransomware attack. In addition to grain processing, the company provides seed, fertilizer, and logistics services, which are critical during the spring planting season.
- In February 2022, a company providing feed milling and other agricultural services reported two instances in which an unauthorized actor gained access to some of its systems and may have attempted to initiate a ransomware attack. The attempts were detected and stopped before encryption occurred.
- Between 15 September and 6 October 2021, six grain cooperatives experienced ransomware attacks. A variety of ransomware variants were used, including Conti, BlackMatter, Suncrypt, Sodinokibi, and BlackByte. Some targeted entities had to completely halt production while others lost administrative functions.
- In July 2021, a business management software company found malicious activity on its network, which was later identified as HelloKitty/Five Hands ransomware. The threat actor demanded \$30 million USD ransom. The ransomware attack on the company led to secondary ransomware infections on a number of its clients, which included several agricultural cooperatives.

Recommendations

Cyber threat actors will continue to exploit network, system, and application vulnerabilities within the FA sector. The following steps can be implemented to

mitigate the threat and protect against ransomware attacks.

- Regularly back up data, air gap, and password-protect backup copies offline. Ensure copies of critical data are not accessible for modification or deletion from the system where the data resides.
- Implement a recovery plan that includes maintaining and retaining multiple copies of sensitive or proprietary data and servers in a physically separate, segmented, secure location (i.e., hard drive, storage device, the cloud).
- Identify critical functions and develop an operations plan in the event that systems go offline. Think about ways to operate manually if it becomes necessary.
- Implement network segmentation.
- Install updates/patch operating systems, software, and firmware as soon as they are released.
- Use multifactor authentication where possible.
- Use strong passwords and regularly change passwords to network systems and accounts, implementing the shortest acceptable timeframe for password changes. Avoid reusing passwords
- Disable unused remote access/RDP ports and monitor remote access/RDP logs.
- Require administrator credentials to install software.
- Audit user accounts with administrative or elevated privileges, and configure access controls with least privilege in mind.
- Install and regularly update anti-virus and anti-malware software on all hosts.
- Only use secure networks and avoid using public Wi-Fi networks. Consider installing and using a virtual private network (VPN).
- Consider adding an email banner to messages coming from outside your organizations.
- Disable hyperlinks in received emails.
- Focus on cyber security awareness and training. Regularly provide users with training on information security principles and techniques as well as overall emerging cybersecurity risks and vulnerabilities (i.e. ransomware and phishing scams).



**A healthy farm isn't
anything without a
healthy farmer.**

CAAMHPforHealth.org

