

STATE

JULY 2020

A SPECIAL ISSUE FROM COLORADO STATE UNIVERSITY AND THE CSU SYSTEM

BANDING TOGETHER *in* CRISIS



[Letter From *the* / EDITOR]

BANDING TOGETHER IN CRISIS

We are reaching you with three special issues this spring and summer – combining *STATE*, the magazine of the CSU System, and *Colorado State Magazine*, the publication for alumni and supporters of our flagship university. These issues are smaller, more frequent, and are mailed to a combined readership. This allows us to conserve resources, deliver timely articles, and stay in touch during a critical time.

THE CALENDAR HAS TURNED TO JULY, and this pandemic's layers and their severity are impacting all of us.

In the United States, there are now approaching 3 million confirmed cases of COVID-19 and almost 130,000 deaths; the numbers are surging as this magazine goes to print. Our national and state economies are haltingly reopening after widespread closures and a U.S. unemployment rate that hit 14.7 percent in April, the highest level since the Great Depression. Our country is also beset with volatile protests and urgent demands for racial equity and justice after the shocking death in Minneapolis of a Black man, George Floyd, in police custody.

The combination is agonizing.

The stories, columns, and essays in this second special issue of *STATE*, focused on the COVID-19 pandemic, demonstrate a path forward for our university communities; in fact, the only path forward. We must band together to identify, confront, and solve problems. This need goes well beyond a vague *spirit* of togetherness. Now, the need to band together requires strenuous joint effort, aimed at overcoming a multilayered crisis unlike anything in memory.

In this edition, you will see how people in our CSU System and its broader communities are joining ideas and efforts to adapt to and effect change. You will find stories of real commitment and creativity – of the frontline and the overtime.

In these stories, you will learn about the *hows* of adaptation and change. Equally important are the *whys*. In our university System, our work centers on opportunity in its most encompassing sense – opportunity for individual, societal, environmental, and economic health and well-being.

It's no wonder, then, that I see colleagues working around the clock through this crisis. The proof comes in middle-of-the-night emails from researchers waging assaults on COVID-19; from administrators examining budgets, health and safety policies, and equity practices; and from educators who fervently wish to see students in person, in good health, and back on campus.

As we band together, we are making progress. ■

– Coleman Cornelius, *executive editor*

STATE

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CONTENTS

[SPECIAL ISSUE / JULY 2020]

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FEATURES

12 | FIELD WORK

As the pandemic continues, our agricultural economy, food supplies, and farm workforce have become key concerns. CSU researchers are contributing insights, as Colorado farmers and ranchers find ways to adapt – in some cases, by going local.

18 | SUPPORT SYSTEM

Campus programs that provide food and emergency aid have moved into crisis response, as more low-income students struggle with cost-of-living expenses during the economic downturn. And donors are stepping in to help.

20 | TAKING AIM

Researchers at Colorado State are in overdrive to battle COVID-19. In a Q&A, Alan Rudolph, the university's vice president for research, describes ways his office supports the research effort to stanch this pandemic and future outbreaks.

22 | ACTION ITEMS

In response to heightened national calls for racial equity and justice, CSU Athletics launched the Together Initiative. It supports Black student-athletes and pushes for societal change through concrete actions in the campus community.

PERSPECTIVES

- 4 | TONY FRANK
Chancellor of the Colorado State University System
- 6 | JOYCE MCCONNELL
President of Colorado State University
- 8 | BECKY TAKEDA-TINKER
President and chief executive officer of CSU Global
- 10 | TIMOTHY MOTTET
President of CSU Pueblo

ESSAYS: BLACK LIFE IN AMERICA

- 24 | RICO MUNN, *education leader*
A complicated relationship
- 26 | CAMILLE T. DUNGY, *distinguished professor*
From dirt
- 30 | DERRICK WILLIAMS, *young alumnus*
The freedom tree

ON THE COVER: "Banding together in crisis," illustration by Dave Cutler. ABOVE: A scene from freshman orientation at Colorado State University Photo: John Eisele / Colorado State University

VALUE SYSTEM

BUDGETING FOR STUDENTS, EMPLOYEES, AND THE STATE



Photo: Joe A. Mendoza / Colorado State University

The Colorado State University System is going to get through this pandemic in solid shape and be ready to welcome students back in the fall.

Budgeting isn't normally an exciting process. Yet budgeting for our campuses during COVID-19 has been a bit of a wild ride – ultimately revealing an ability among leaders and policymakers to band together for the benefit of our students, employees, and the economic stability of our state during the most significant crisis of our lifetimes.

It wasn't easy to get here. Back in May, when we would normally be finalizing our budget planning for the year in conjunction with the Colorado Legislature's passage of its Long Bill, we were instead starting over from scratch. Faced with a looming deficit of more than \$164 mil-

lion across the CSU System, with state and federal support still uncertain, our campuses began to plan for cuts that would have sliced deep into the quality and capacity of our universities – perhaps irreparably.

The significance wasn't lost on those who understand how critical higher education is to the economy of our state and local communities. In Northern Colorado, CSU is the largest employer. In Southern Colorado, CSU Pueblo is one of the largest employers. CSU Global employs people in communities around our state and around the country. Our graduates are essential workers in key industries that fuel our state's fiscal and societal well-being. Our research yields new knowledge and innovations that spur business, economic development, and quality of life in Colorado and around the world.

We know that in the wake of the Great Recession a decade ago,

This type of planning, and the innovative thinking that undergirds it, are standard operating practice for CSU.

After the Great Recession, our board prioritized reserves in all of its budgets for a decade, so that we could be prepared for this type of disaster and continue to deliver on our mission.

communities that were home to college campuses rebounded more quickly than other places. Gov. Jared Polis, our congressional delegation, and members of the Colorado Legislature all know this – and rallied along with the Board of Governors of the CSU System to help stabilize higher education during the crisis.

As a result, the budget our board approved is significantly more positive than those facing most U.S. campuses, thanks to the state government's strategic deployment of funds from the federal Coronavirus Aid, Relief, and Economic Security Act and the vision of our Board of Governors in marshaling resources and preparing for emergencies over the last decade. We are freezing tuition across all our campuses and avoiding salary and job cuts. This package leans heavily on federal stimulus funds, pairing them aggressively with CSU System reserves and proceeds from board-initiated refinancing. These funding sources allow us to substantively spare the campuses, where the real work of teaching, discovery, and engagement occurs.

Let's pause here and be clear. We are not avoiding deeper cuts because our campuses lack that will; indeed, future years may show the need for additional reductions. We are avoiding these cuts in no small part because of our role as a public entity, established by an act of Congress and supported for 150 years by the citizens of Colorado to build a better future.

Everywhere higher education turns today, one sees risk. And the easiest way to mitigate risk – in an organization where more than 80 percent of the costs are personnel expenses – is to turn to layoffs. But layoffs in a time of high unemployment simply fuel downward economic pressure. A part of the role we can play today, as we did in the Great Recession, is as a stabilizing influence in the economy of our communities and our state. So, instead, our Board of Governors prioritized payroll protection, choosing not to take the easy path. And, not as chancellor, but as a taxpayer, I want to publicly thank them for the position they took. By doing so, they added a stabilizing factor into our economy and planted the seeds for economic recovery that we know will come.

Similarly, freezing tuition ensures that our mission of access and opportunity remains strong at a time when higher education will be an economic lifeline for many people who are either newly unemployed or retooling for a workforce that looks dramatically different than it did six months ago.

Our campuses will still do some belt-tightening and feel the impact of the pandemic recession. Many positions will remain unfilled, and all of us will need to pick up that load. We will also continue to plan for the contingency of a more prolonged economic downturn than any of us hope for.

This type of planning, and the innovative thinking that undergirds it, are standard operating practice for CSU. After the Great

Recession, our board prioritized reserves in all of its budgets for a decade, so that we could be prepared for this type of disaster and continue to deliver on our mission.

Around that same time, they hired Becky Takeda-Tinker as the first president of CSU Global – and under her leadership, it became the country's first fully online, fully accredited public university. CSU Global receives no state funding, and it is built on a business model that is completely unique in the higher education marketplace. During a time when online education is suddenly in the spotlight, CSU is well-positioned with the best and most well-established online model of any state university system in the country – a model that emerged during a previous economic crisis and continues to serve us well.

Now, as we navigate through this latest crisis, we're continuing to focus on possibilities. In June, we announced that President Takeda-Tinker will step into a new role with the System as chief educational innovation officer. In this role, she will be leading our System in exploring new ways to fill in gaps in our nation's education pipeline, aiming to deliver learning that provides a measurable return on investment for students and industries, particularly in the arena of workforce education. She will be spearheading partnerships with industry, government, and other universities to ensure our entire workforce has the training and opportunities needed to get back to work and keep our economy strong.

COVID-19 may be the most encompassing crisis of our lifetimes, but it is one of many potentially devastating crises that CSU has endured in its 150 years. The pandemic itself has exposed societal fault lines, particularly racial and economic inequities, and addressing these honestly and seriously will be as important to the future health of our society as the search for a COVID-19 vaccine. In the face of all these challenges, we know that with an innovative spirit, a relentless focus on sound management and planning, and strong leadership on each of our campuses, we will forge ahead and be ready to welcome students back in the fall – and to move forward from there to address the critical, mission-driven work that our universities exist to do.

As chancellor, I could not be more proud to deliver this message or more grateful to our board leadership, our state government and federal congressional representatives, and the faculty, students, staff, and leaders of our System campuses. ■

Tony Frank, D.V.M., Ph.D., is chancellor of the Colorado State University System, which includes Colorado State University, CSU Global, CSU Pueblo, and the emerging Spur campus at the National Western Center in Denver. He became full-time chancellor in July 2019, after serving as 14th president of CSU, the System's flagship, for 11 years, with four years in the dual role of chancellor and president.

[Perspective: *Joyce McConnell* / PRESIDENT, COLORADO STATE UNIVERSITY]

WE WILL THRIVE

Photo: John Eisele / Colorado State University

EQUITY-DRIVEN ACTION WILL HELP US RECOVER FROM COVID-19

We've all found our coping strategies put to the test during the first difficult months of 2020, when a global pandemic has turned our daily lives – and the life of our university – upside down. I have been incredibly proud of the fortitude our students, faculty, and staff have shown, even as they had to leave our beautiful campus (just when trees on the Oval were turning green again!) to learn, teach, and work from home.

Given the challenges COVID-19 has created, Gloria Gaynor's ballad of strength and determination was already my soundtrack to this year. Then, yet another wave of racist violence perpetrated against Black Americans exploded our national dialogue. Now, the phrase "We will survive" feels even more urgent for our community and for communities across the country.

At the same time, I challenge us all to set a goal beyond mere survival. I challenge Colorado State University to fulfill our access mission and to be a place where everyone feels welcomed and valued. I challenge us to *thrive*, both as we recover from the pandemic and as a community that is avowedly anti-racist. In this moment, voices across the nation make it clear: Diversity and inclusion are not enough. It is time for more, for equity and justice, which demand action instead of words.

Our university has a tradition of not only surviving adversity, but

also thriving in the face of it. That's what we've done, as a university and on behalf of our state, during the COVID-19 pandemic. For instance, our important research continued after a brief pause to implement critical new safety protocols; this was unlike many institutions, even peers with significant research enterprises. Many CSU researchers with relevant expertise have focused on projects targeting COVID-19, research that will help fight infectious disease even after the ravages of this novel coronavirus are quelled.

Nor did we turn our backs on Colorado, even as we had to rethink how our CSU Engagement and Extension professionals interacted with their partners. And because our students are always our priority, we went to extraordinary lengths to help them survive the end of the spring semester, including reaching out personally to hundreds of students to support their online learning.

After successfully addressing the immediate impacts of the pandemic, we turned to preparations for recovery. Our continuing focus has been on assuring the health of our faculty, staff, and students, while also working to maintain the financial stability of the university itself.

Just a few months ago, with budget cuts for the coming fiscal year a certainty and no clear end to the pandemic in sight, we knew continuity of operations and the reopening of CSU's campus in August

would require significant planning to work through unprecedented challenges. Our intense and inclusive recovery process has been built around a set of working groups that tap the wisdom and expertise of administrators, faculty, and staff. Working virtually and under difficult conditions, their commitment has been amazing; these groups have at times met literally around the clock to sort through multiple scenarios and to reach their recommendations.

Our campus team has worked in close collaboration with the CSU System office, relying on the best data and information available. The results leave us feeling more optimistic than we initially feared, with deep budget cuts avoided through flexible, multilayered strategies and targeted tactics.

As a result, our Fall 2020 semester, with classes starting Aug. 24, will take place in person and on campus as much as public health guidelines will allow. We are putting in place a comprehensive framework that will position new and returning students to do more than survive. We want to help them thrive. This framework is grounded in our commitment to our students' health, both mental and physical; to equity; to access; and to student success.

In logistical terms, this means things such as large lecture courses will be held virtually, while smaller courses, freshman courses, and laboratories will take place in person. Our overarching vision for fall semester, though, is not driven by logistics. It's a vision that reaffirms

CSU's commitment to offer all our students access to a world-class educational experience from our dynamic faculty, while also showing them that doing things differently – even out of necessity – can be exciting and can produce tremendous results.

Our fall semester necessarily will look different than previous semesters in Fort Collins because of the COVID-19 pandemic. We are also determined to make this and all future semesters *feel* different, as we promote and ensure equity and justice, and condemn and eradicate racism, bias, and hate in our campus community.

We know challenges remain. But one thing is absolutely certain: We are not fulfilling our mission as a land-grant institution if any of our students graduate saying, "I survived CSU." My vision is for all our students to have a positive experience at this extraordinary university and in this wonderful community; an experience in which they don't just earn their degrees, but leave campus saying, "I *thrived* at CSU." ■

Joyce McConnell, J.D., is the first woman and 15th president to lead Colorado State University, flagship of the CSU System and the state's land-grant university. Founded in 1870, CSU is marking its 150th anniversary. Before joining CSU in Summer 2019, McConnell was provost at West Virginia University; she was earlier dean of the WVU College of Law.

MISSION CRITICAL

TEAMING WITH INDUSTRY TO PROVIDE URGENTLY NEEDED LEARNING

During an unfathomable two months this spring, more than 40 million U.S. workers suddenly lost their jobs and filed unemployment claims as the COVID-19 pandemic forced suspension of business activity. If research projections prove true, more jobs could be vulnerable to loss, furlough, or wage reduction before we see the number abate. On the flip side, as U.S. companies emerge from the devastation and seek to regain traction, many will need to fill vacancies for qualified workers.

Therein lies the rub: The sectors that have shed most workers are not the same industries seeking to hire; therefore, many of the unemployed are likely to remain on the sidelines unless they reskill. Case in point, the leisure and hospitality sector is forecast as one of the fastest declining industries in the nation and has lost nearly half of its positions due to the pandemic; at the same time, there are an estimated 1 million unfilled positions in the information-technology industry, and its growth is projected at 22 percent this year alone.

This structural unemployment challenge is significant. Solving it as the nation gets people back to work will require intentional and integrated collaboration among business leaders, educators, and community leaders. This is especially true because our nation's structural unemployment problem – defined by the schism between needed and available employee skill sets – is expected to grow as a result of the pandemic. Adaptation will be essential to recovery.

CSU Global is meeting this challenge. Our public university is fully online, delivers asynchronous courses in an eight-week format, and provides student support seven days a week, virtually around the clock. This approach helps students graduate as they successfully juggle work, family, and community responsibilities.

In fact, we celebrated more than 1,100 new alumni on May 30 in our biggest virtual commencement ceremony to date.

We join with hiring businesses, actively driving industry collaborations to achieve both academic and workplace success. As a state nonprofit institution, CSU Global is passionate about helping industry organizations continuously identify innovative, efficient pathways to blending workplace needs with deep learning; this makes learning part of employees' jobs and lives, benefiting student-employees, employers, and the economy.

An important aspect of CSU Global's industry collaborations comes in our recognition of the value of on-the-job training. Our faculty closely evaluate organizational training for higher education outcomes in an effort to award credit to student-employees when appropriate, even if we did not originate that education. One of our partners is DaVita, a nationwide health care provider with an exemplary leadership training program; we offer students employed by DaVita credit for their completion of that training. The resulting combination of employer-generated training and CSU Global course work means students efficiently complete their degrees with a healthy mix of academic knowledge, industry

knowledge, and required workplace skills.

CSU Global has also been diligent in smoothing the process of credit transfer, working closely with employers and other postsecondary institutions to do so. This is critical for students completing their bachelor's and master's degrees; it represents a win-win for student-employees and their employers across the nation, reflecting alignment between real-world needs and higher education.

Similarly, industry collaboration in the creation of educational programs has been central to CSU Global's mission since the university launched in 2008. This interaction has become even more important as our economy recovers from the pandemic

– and businesses and higher education alike see an urgent need to adapt to new realities. To this end, our faculty work with industry leaders to design unique degree offerings, customized specializations, and certification programs.

For example, we are in final approval stages for a certificate and a master's degree program in military and emergency responder psychology, a program requested by community stakeholders. After conducting research regarding Colorado, U.S., and global needs, our academic leadership partnered with police and military leadership and psychology experts to develop courses needed to address the mental health needs of our military members and first responders.

As a nonprofit, fully online institution in the CSU System, CSU Global is proud to serve its students and Coloradans. Our university is designed to respond to businesses and industries seeking an agile, collaborative approach to workplace success, facilitated through high-quality and affordable education. Achieving this CSU Global mission has never been more important than in this period of recovery from COVID-19. ■

Becky Takeda-Tinker, Ph.D., is president and chief executive officer of Colorado State University Global. She will soon transition to a new role as chief educational innovation officer for the CSU System.



Photo: Ben P. Ward / Colorado State University

PEOPLE'S UNIVERSITY

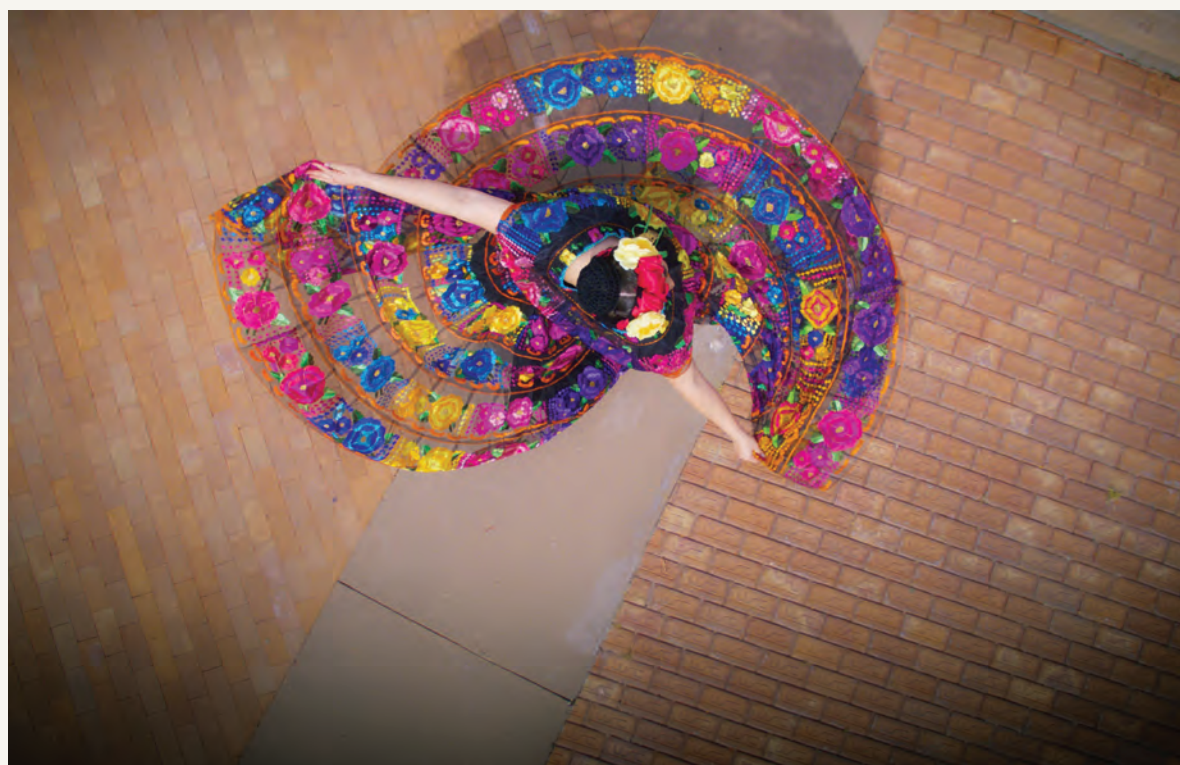


Photo: CSU Pueblo

SUPPORTING STUDENTS AND COMMUNITY DURING THE PANDEMIC

Our campus has two defining characteristics helping to guide our response to the COVID-19 pandemic, with an emphasis on student support and community connections: We are a regional comprehensive university, one focused on preparing students for critically needed careers in our region; and our campus is federally designated as a Hispanic-Serving Institution, a classification that not only describes our student body, but also has allowed us to secure essential funds that contribute to our support for students in this financially stressful time.

We know racial disparities in our country are real and that our university's plans for the future must account for these realities to support student success and regional economic health.

These characteristics also provide a framework for our 10-year strategic plan, debuted in 2018 and called Vision 2028; it is invaluable as a blueprint for pandemic response and recovery.

Even as COVID-19 has generated many concerns and uncertainties, our university gains strength from its roots – a fact validated in an article published in *Forbes* magazine in May. “Colorado State University Pueblo is one of the country’s up-and-coming HSIs,” the respected business magazine reported, referring to our designation as a Hispanic-Serving Institution.

Our federal designation reinforces our foundational mission of serving students and our region; it motivates CSU Pueblo to meet the needs of a population vulnerable to health and economic ravages of the coronavirus pandemic. We know our support for students has a ripple effect through our region, where residents are proud of our heritage of racial diversity and hard work.

Campus population data reflect this story: Of our total student body of 4,300 students, nearly half have both low-income and racially diverse backgrounds; 34 percent are Hispanic or Latinx. Most of our students are from working-class families, and many are the first in their families to attend college.

This diversity is one important reason that, in a letter to our campus community in June, I condemned the hate and violence that has been perpetrated against people of color at the hands of violent individuals, groups, and organizations during and preceding the pandemic. Our campus community is proud of its history of inclusion and acceptance, so it is important for us to understand and voice the disproportionate burden of the coronavirus pandemic – in its health, economic, and societal effects – on Hispanic, Black, and Native American populations.

We know racial disparities in our country are real and that our university’s plans for the future must account for these realities to support student success and regional economic health.

Arising from campus and regional attributes, Vision 2028 has prepared us to meet a future that is less predictable because of COVID-19. The plan will implement a set of strategies to embed more students in work-based learning, so they may test-drive careers, earn college credit, and draw salaries that help with tuition costs. These strategies also meet the needs of our adult learners who have some college but no degree, thus encouraging students to earn credentials that drive earning power, quality of life, and economic development in Southern Colorado.

In the months ahead, we will develop much deeper relationships with our area employers, while developing new student success initiatives to strengthen learning and support systems in the wake of

the pandemic. These new tactics within our vision manifest our commitment to people and community, which reflects our DNA.

Here are a few examples of how our vision and practices join to benefit our students and community.

Each new student at CSU Pueblo is paired with an academic success coach; new technological tools enhance communication between students and advisers. Our faculty are increasingly attuned to desired learning outcomes and skills, including teamwork, critical and creative thinking, communication skills, and problem-solving; we cement these outcomes in guiding principles, including entrepreneurship and sustainability, which bolster society broadly. Much of our academic programming advances these essential skills by emphasizing collaborative and interdisciplinary learning that reflect needs in the real world.

Our designation as a Hispanic-Serving Institution amplifies such efforts by qualifying our university for federal grants. For instance, CSU Pueblo recently landed a \$6 million grant from the U.S. Department of Education that helps us draw students into STEM fields, with an emphasis on new and redesigned course work, hands-on research projects, and mentoring.

This work is promoting student retention and graduation, which is foundational to quality of life and regional economic health.

This pandemic has upended life as we knew it, and it is unlikely the old reality will return. CSU Pueblo is facing this uncertain moment with tenets that would steady us at any time – and are proving paramount now. We are practicing creative persistence, managing complexity, navigating change, and engaging diversity.

These principles help us prepare to restart in-person learning on campus in August, with appropriate modifications based on local, state, and federal guidance. In tandem with that guidance, we are using technology and connectivity to advance education, often working on multiple online platforms, based on the tasks at hand.

Our students are resilient and determined, and CSU Pueblo is equally determined, even during a pandemic, to help them build opportunities. That’s what makes us the people’s university of the Southwest. ■

Timothy Mottet, Ed.D., is president of Colorado State University Pueblo. As a recent Baldrige Executive Fellow, he undertook leadership development through a top-ranked program of the U.S. Department of Commerce and has been recognized as an educational trailblazer by the Center for Digital Education.

BY COLEMAN CORNELIUS

FIELD WORK

COLORADO FARMERS AND RANCHERS
ADAPT TO UNCERTAINTIES

Before the COVID-19 pandemic, the phrase “food supply chain” seemed arcane to many of us. It soon became as obvious as a kink in the garden hose: The supply was there; it just wasn’t flowing.

The first clue, a point of shared humor, was the disappearance of toilet paper from supermarket shelves last spring, as stay-at-home orders loomed and people foresaw weeks in quarantine. Then, anxious shoppers bought most everything: staples such as beans, flour, pasta, potatoes, and rice; later, meat and poultry. Bananas, like other produce, were there, gone, there again.

“A pandemic that is global in scope causes a cascade of effects in food and food supply,” said former Secretary of Agriculture Tom Vilsack, president and chief executive officer of the U.S. Dairy Export Council and an adviser to the CSU System on food and water initiatives. “We were not well prepared for the disruptions, and it took a while for people to realize it wasn’t about a food shortage. It was about complicated distribution issues.”



Agriculture is crucial to the Colorado economy, contributing an estimated \$41 billion annually and employing some 173,000 people. The health of farmworkers is an important focus, especially with increased activity during harvest. Photography: Joe A. Mendoza and William A. Cotton / Colorado State University



“There are tradeoffs between efficiency and resilience, and one thing the pandemic has shown us is the need to think about those tradeoffs with more intention. We’ve developed an incredibly efficient food system, where we can provide safe, affordable food for the vast majority of Americans. But we need a better understanding of the pinch points.”

— Becca Jablonski, CSU food systems economist

Even packaging has played a critical role. Baker’s yeast, for instance, vanished from grocery stores as homebound cooks dusted off their bread machines. Supply wasn’t the issue; instead, the gargantuan food system is designed to deliver yeast to commercial bakers in big batches, not to retailers in little packets.

Consumers – those of us who eat – might lack knowledge about food production and distribution, an outgrowth of urbanization. But at least a few of us were ready to figure it out when facing those bare shelves. Even as grocers caught up, a change in buying habits sprouted: The demand for locally grown food, building over four decades, has spread among a number of people with access to it. Many farms and ranches working in community-supported agriculture are sold out of customer shares, with long lists of fresh food deliveries mapped out for months to come. Same goes for some of those using other direct-to-consumer outlets, including farmers markets, farm stands, specialty shops, and online ordering for pickup or delivery.

“COVID startled us awake about how essential farmers and ranchers are to our lives and our state,” Kate Greenberg, Colorado commissioner of agriculture, said. “When you know your farmer or rancher, you don’t have to wait for the supply chain to catch up.”

Given the global economic slump caused by the pandemic, analysts expect net cash farm income, a widely used indicator, to drop by 15 percent nationwide this year, even accounting for billions in emergency financial aid for farms and ranches, said Tom Lipetzky, director of marketing programs for the Colorado Department of Agriculture. The hit will likely be similar in Colorado, with uncertain

effects on food prices, he said. The projection is significant, since 70 percent of U.S. farms run with slim profit margins of less than 10 percent, according to the U.S. Department of Agriculture.

Growth in direct-to-consumer food sales, a market crucial to many small and midsize farms and ranches, has offered a flicker of hope for some producers. Expanded sales, because of associated costs, don’t always equate to increased profit. Even so, the apparent resilience among some smaller growers is now the subject of studies and policy debates focused on a U.S. agriculture and food industry that annually contributes more than \$1 trillion to the national economy and is built chiefly for maximum efficiency. That efficiency is the very reason most of us enjoy inexpensive, abundant, and safe food – but it also means the system generally lacks the flexibility needed for quick response to broad market disruptions.

“There are tradeoffs between efficiency and resilience, and one thing the pandemic has shown us is the need to think about those tradeoffs with more intention,” said Becca Jablonski, an assistant professor and food systems economist with CSU’s Department of Agricultural and Resource Economics and Food Systems Initiative. “We’ve developed an incredibly efficient food system, where we can provide safe, affordable food for the vast majority of Americans. But we need a better understanding of the pinch points.”

Jablonski and her colleague Dawn Thilmany, a professor of agricultural economics, recently joined researchers at the University of Kentucky and Pennsylvania State University in an examination of the pandemic’s effects on local and regional food systems across

the country. The team is working with a \$1 million grant from the USDA and more than a dozen food industry trade groups. They seek to understand market disruptions, successful adaptations, and economic impacts, with findings expected to shape policies and preparations for future crises. Another project, funded with more than \$2 million from the Foundation for Food and Agricultural Research, is studying those and related issues. Colorado State’s research-based input is “profoundly important,” Greenberg said.

Understanding dynamics in local and regional markets is vital, Jablonski said, because farmers and ranchers in these markets typically are under-represented in research and policy spheres. Moreover, local markets often are entry points for new farmers and ranchers.

The CSU Food Systems Initiative leads wide-ranging research and Extension activities, maintaining close ties to industry, government agencies, food banks, marketing associations, and Colorado communities – resulting in a multilayered, 360-degree view of state and regional agriculture.

The group is contributing in many ways during the pandemic. Notably, its economists wrote a policy paper submitted in March to the U.S. Senate Committee on Agriculture, Nutrition, and Forestry as Congress was drafting the \$2 trillion emergency aid package known as the CARES Act. The report projected up to \$1.32 billion in nationwide economic loss resulting from the expected impact to farms and ranches selling through local and regional markets; the analysis effectively advocated for economic relief through the complete food supply chain, small and midsize producers included. Through the CARES Act and other programs, the U.S. Department of Agriculture is distributing \$19 billion in relief funds to farmers, ranchers, and nonprofits such as food pantries that help people in need.

That was just a start for the CSU Food Systems Initiative. During the pandemic, the group has released health and safety guidelines for regional meatpacking plants and farmers markets. The team has studied the potential effects of COVID-19 on farmworkers and their families, along with ways to reduce those threats; these concerns are urgent with the approach of peak harvest season, when farmworkers are indispensable in getting fruit and vegetables from field to market. A task force of the Food Systems team also is providing economic analysis for the Colorado Department of Agriculture, Governor’s Office, and Legislature during the pandemic.

“The markets are going to survive, and producers within them are going to survive. But a lot of them are saying, ‘It’s a brave new world,’” said Thilmany, a leader of CSU’s food systems research.

The researchers don’t have to look far for anecdotal evidence of adaptations. They began when the pandemic’s domino effects shredded the U.S. economy, starting with shutdown of restaurants, schools, and other major links in the food supply chain. For a taste of why that matters, consider: In 2019, Americans did 55 percent of their food spending away from home; we often eat out more than we eat in, and the food system is geared to fill that demand. The pandemic delivered other blows, including more trade disruptions, widespread unemployment, and out-

Opposite: CSU crops researcher Michael Bartolo discusses chile farming in the Arkansas Valley. Photo: William A. Cotton / Colorado State University
 Right, above: Peaches are important on Colorado’s Western Slope; this year, growers are suffering from the pandemic and a disastrous late freeze. Right: The Larimer County Farmers’ Market, run by CSU Extension, reports strong demand. Photo: Karen Collins





William A. Cotton / Colorado State University

“COVID startled us awake about how essential farmers and ranchers are to our lives and our state. When you know your farmer or rancher, you don’t have to wait for the supply chain to catch up.”

— Kate Greenberg, Colorado Commissioner of Agriculture

breaks of worker illness that forced closure of the nation’s largest meat and poultry processing plants.

As food producers lost major markets, consumers looked to new and different outlets – in some cases, close to home. “When you go into the grocery store and the shelves are empty, it triggers something in your brain,” said Hadyn Christensen, who graduated from CSU in 2013 with a degree in soil and crop sciences and owns Colorado Fresh Farms north of Fort Collins.

As he recently sold early-season produce at the Larimer County Farmers’ Market, Christensen said he panicked in early March and “started thinking about how to reach people.” He tapped into the pandemic’s uber-local food trend by growing and selling vegetable starts to backyard gardeners. Christensen put together victory garden packages – including tomatoes, cucumbers, squash, carrots, beets, and herbs – inspired by those planted during World War I and World War II to build food supplies and morale. He added a sales feature to his website and advertised on Facebook; the packages sold out immediately. Now, Christensen is using his website to let customers place produce orders in advance, with times set for

easy pickup at the farmers market. The idea even complies with social-distancing guidelines.

On the Western Slope, the ranchers who partner in Homestead Meats likewise were set to fill locavore demand. At the start of the year, they were readying to open a retail store in Delta, Colorado, to sell locally grown beef, pork, and lamb, along with eggs, artisan cheese, and other cottage food products. The shop would be an additional outlet in the group’s direct-to-consumer business, supplying meat from local pastures to local plates.

Then the pandemic mushroomed and sent shock waves through agriculture. “We had worked for six months to put in the infrastructure, but we had to ask, ‘Is this the right time to open the doors?’” said Robbie LeValley, a CSU alumna who runs LeValley Ranch with her husband, Mark. The couple are among the founders of Homestead Meats, a 25-year-old business that includes a USDA-inspected meat processing plant. “We knew we had a steady local customer base,” LeValley continued. “What we didn’t know was what kind of foot traffic we would have when stay-at-home orders were put forward.”

The partners opened the retail shop in March. The stay-at-home

orders came. But so did the customers, since food producers and grocers were authorized to continue operating. In fact, revenue for Homestead Meats was up 17 percent in the first six months of 2020, compared to the same period last year. “There is tremendous interest,” said LeValley, who worked for many years as regional range and livestock specialist for CSU Extension. “It’s very rewarding to sell direct to consumers and to have that interaction.”

Smaller farms and ranches may be able to bend and stretch in the face of market disruptions because they often direct an array of operations at a scale that allows for nimbleness: They grow, process, package, distribute, and sell. If a farm loses restaurant business, it might open a roadside stand or start online sales. “It continues to amaze me how much they adapt and change to make it work,” said Wendy White, a CSU alumna who manages the Colorado Proud program, which promotes food grown and processed by nearly 3,000 farms, ranches, and other businesses in the state.

But there’s a major difference between big and small: Niche producers must command a premium, and customers must be willing to pay it. By contrast, the nation’s food system as a whole has evolved to produce lots of food inexpensively. “We want food to be convenient, and we want it to be cheap. That puts a lot of pressure on people who grow and sell it to us,” Vilsack, the former agriculture secretary, said.

Last year, Americans spent an average of just 9.5 percent of disposable personal income on food, according to the USDA. Low-income families spend a much greater percentage of their budgets on food, and their access to fresh and nutritious products is a glaring

The top five agricultural products in Colorado, based on sales, are cattle and calves; dairy products and milk; corn for grain; hay; and wheat. The cattle sector outpaces others by far, tallying about \$3.5 billion in yearly cash receipts.

problem exacerbated by the pandemic. Yet, generally speaking, Americans for years have spent less of their household incomes on food than people in other developed nations, Vilsack said.

To fill demand, players in the food system go big to achieve economies of scale, resulting in consolidation and fewer, but larger, operations that interact at a national and global scale. Big ships can be slow to turn; that has led agricultural economists at CSU and elsewhere to ask whether policy propellers modeled on the adaptability of smaller food producers might help chart a course for future crises.

Meantime, many farmers and ranchers are seeking new and established ways to manage risks, a familiar tack for people whose yearly profits can be wiped out by a late freeze or hailstorm.

“With COVID-19, uncertainty is higher than it normally is,” said Roger Mix, a CSU alumnus and third-generation potato farmer in the San Luis Valley of Southern Colorado. Even before the pandemic emerged in China late last year, Mix had invested in seed, fertilizer, equipment, and other needs for this season’s fields of russet potatoes, quinoa, barley, and forage. He planted and planned to the extent possible. “All of the markets are so interwoven,” said Mix, who serves as vice president of the Colorado Fruit & Vegetable Growers Association. “You have so many different factors that can come down on you that you have to try to be optimistic.” ■



SUPPORT SYSTEM

MEETING NEW AND INTENSIFIED CHALLENGES DURING THE PANDEMIC

By Coleman Cornelius / Photograph by Ben P. Ward

The Rams Against Hunger food pantry is set up in CSU's student center three times per week this summer.

Reporting from Tony Phifer, Andy Dixon, and Haley Sue Robinson

On a recent summer morning, a crew of Colorado State University employees packed boxes with produce and staples at a new food pantry on campus. Into the boxes went apples, carrots, onions, beans, bread, peanut butter. Into the arms of students went the 30-pound boxes.

The distribution was part of Rams Against Hunger. The program provides food to low-income students facing shortages as they work to pay the full costs of university attendance, expenses that have grown especially worrisome during the COVID-19 pandemic. For many students, tuition and fees are just part of ongoing financial concerns – and those costs are frequently covered for students who qualify for scholarships and other forms of aid. In fact, the combination of housing, bills, food, and related living expenses can often

form barriers to higher education.

“It gives me peace of mind,” a graduate student in ecology said, as she accepted a cardboard box filled with food.

The COVID-19 pandemic has sharpened cost-of-living woes for many students, as they and their family members have lost jobs during spiking unemployment. In one sign of intensified need, the number of people seeking help from Rams Against Hunger more than doubled early in the pandemic, from about 800 to nearly 2,000 per month, said Michael Buttram, who coordinates the program. Demand is so significant that the campus food pantry, earlier a monthly program, now runs in the Lory Student Center three times each week and is open to students and others in the campus community who are struggling to get by.

“Ram Aid has been a great help. They are helping me achieve my dreams. I’m so grateful for the people who donate – they are making a big impact on my life.”

– Ricky Reyna, Ph.D. candidate, Colorado State University

“The student can’t be a student until they have their basic human needs met,” Buttram said. “A person needs food, clothing, shelter, and health. Without those things, a person can’t be a student.”

The pandemic pushed university classes online and largely emptied physical campuses last spring, but that did not change basic needs or costs of living. For low-income students, including many first-generation scholars, needs are expected to increase as in-person classes resume next month and the pandemic’s economic fallout wears on.

“With the pandemic, literally thousands of students are experiencing both loss of income because of lost jobs and additional expenses due to housing issues, technology needs, food insecurity, and the list goes on,” said Tom Biedscheid, CSU assistant vice president of enrollment and access. “These financial hardships can cause students to disenroll, and that’s the last thing we want to see happen.”

In response, programs offering food and financial relief have started or expanded on all three CSU System campuses to help students stay on track. Several programs also support faculty and staff. In Fort Collins, Rams Against Hunger and Ram Aid, an emergency fund, are important resources. At CSU Pueblo, the Pack Pantry and Embrace the Pack provide aid. CSU Global, an entirely online university, is offering new enrollment options and scholarships to deliver financial relief.

“I was laid off, but the support will allow me to continue my education without pushing back my graduation,” said Elias Papadakis, a CSU Global student and former airline employee. He had four classes to finish for his bachelor’s degree in human resource management when the pandemic decimated the travel industry.

Danielle Kasmarik, another CSU Global student, is in a master’s degree program in health care administration. Her employer had supported her studies but could no longer do so with the financial challenges of COVID-19. “I am so grateful for CSU Global for making sure I could complete my spring courses without taking out substantial loans. The support made it possible for me not to delay my degree, and it will make a big difference in my career plans,” Kasmarik said.

Beyond administering campus-based support, System staff have swiftly distributed funds to thousands of qualifying students through the federal Coronavirus Aid, Relief, and Economic Security Act and have connected disadvantaged students who do not qualify to other emergency resources. The latter group includes international and undocumented students.

For instance, Vincent Ontita, from Nairobi, Kenya, is working on a master’s degree in conservation leadership at CSU and was set to return to his home country for a research project when the pandemic terminated his job and travel plans. Ontita suddenly faced unplanned housing and living expenses; he found help through Ram Aid. “I was so stressed thinking about how I was going to pay for rent and food, and the program removed the stress and helped me focus on my studies,” he said.

Donors are stepping up as similar stories emerge. Many understand that helping students meet basic needs is central to System and campus missions of providing access to higher education and related opportunities. “During the COVID-19 crisis, the need for these relief funds has grown exponentially, and our donors have responded with incredible generosity,” said Kim Tobin, vice president for University Advancement at the flagship campus in Fort Collins.

In one case, an anonymous donor contributed \$1 million to the CSU Ram Aid program. The gift will provide emergency aid for hundreds of students straining to pay bills while staying on track to earn their degrees.

How important are donors who extend stopgap support? “They are helping me achieve my dreams. I’m so grateful for the people who donate to Ram Aid – they are making a big impact on my life. I hope to give back myself one day,” said Ricky Reyna, a Ph.D. candidate in systems engineering. He had been covering expenses through work for a software company; the pandemic brought that to an end.

The campuses also have been creative in helping students. In Fort Collins, the CSU College of Business started a series of online courses, called “Rethink, Reinvent, and Recover: Preparing for the Challenges of an Uncertain Future,” designed to help business people manage change in the pandemic. The courses were free, but the college asked enrollees to donate to Rams Against Hunger.

“I talked to one student who works three jobs to help pay for school and was laid off from all three. In challenging times like this, philanthropy may be the only mechanism that allows a student to pursue their dream of attending CSU or enables a student to stay in school. That’s important because education is the way to a more secure future,” business Dean Beth Walker said.

At CSU Pueblo, coordinators of the Pack Pantry have established a system for online requests and have scheduled food pickups that avoid face-to-face interaction for students, faculty, and staff facing food insecurity. In another pandemic pivot, the CSU Pueblo Foundation was forced to cancel its annual President’s Gala, a springtime fundraiser, and instead called upon would-be attendees to donate to Embrace the Pack. The one-month online campaign raised \$82,000 – funds earmarked entirely for emergency tuition support; donations far surpassed expectations, and the total is notable at a small campus with about 4,000 students, said Todd Kelly, chief executive officer of the CSU Pueblo Foundation.

Dan Tyler, a CSU professor emeritus of history, understood the weight of cost-of-living expenses well before COVID-19. He established a fund to provide crisis aid for students in the College of Liberal Arts. “I want to focus on the kids who have the courage to move forward despite the challenges they’re facing,” Tyler said. “That takes guts.” ■

To donate, visit university websites.

TAKING AIM

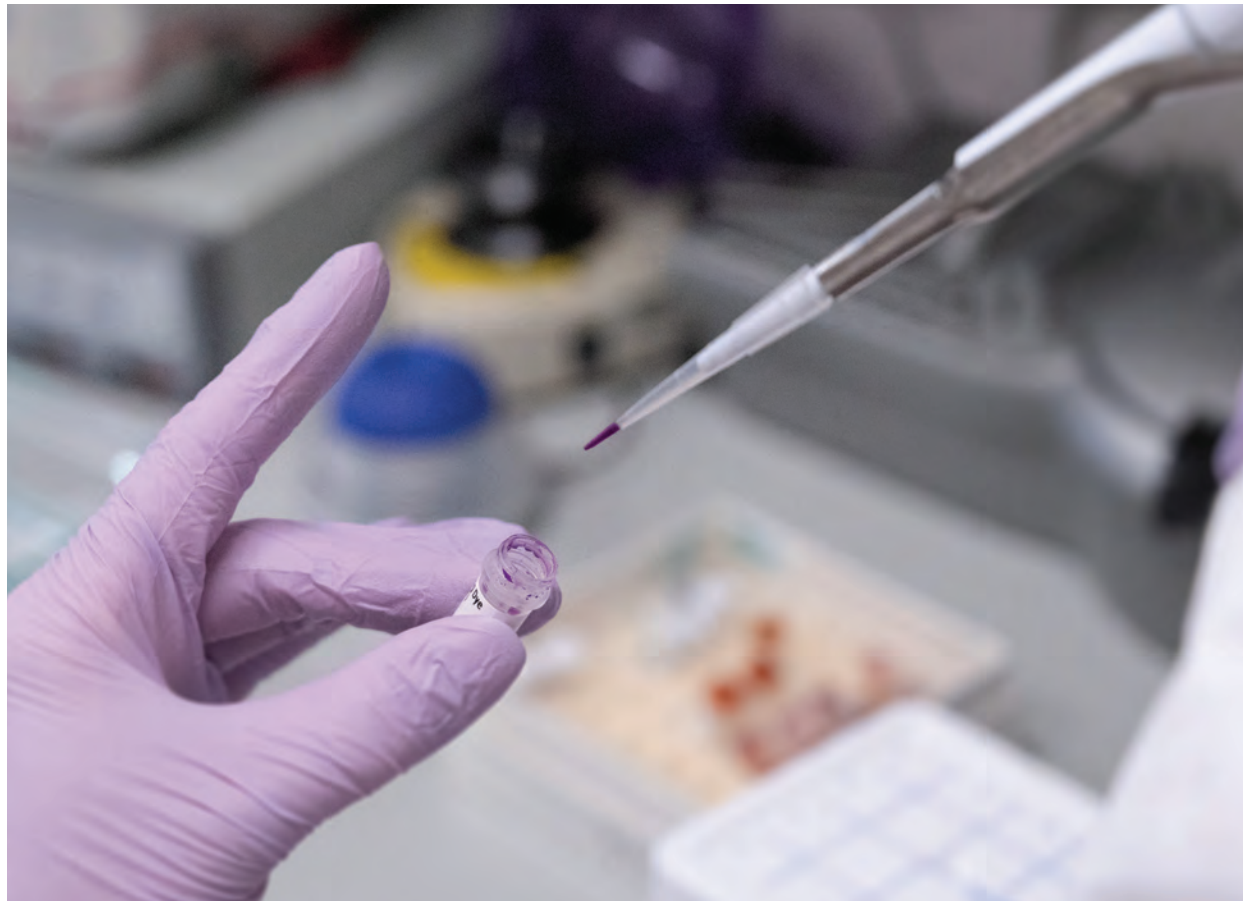
RESEARCH LEADER DEPLOYS STRATEGIES TO BATTLE COVID-19

Researchers at Colorado State University are responding aggressively to COVID-19: Dozens of investigators are pursuing discoveries in disease surveillance, testing, prevention, and treatment – part of a global scientific response to the crisis.

This is just one part of the university’s discovery enterprise. In the last fiscal year, CSU research expenditures – a barometer of productivity – totaled nearly \$400 million, reflecting an upward trend that strengthens student learning, societal well-being, and economic health.

Alan Rudolph, CSU vice president for research, represents this world-class science through advocacy with policy-makers and funding agencies; targeted seed funding for promising new research; and the formation of industry, governmental, and academic partnerships.

Rudolph has a unique background, with extensive experience in government and industry, where he has translated biotechnology into applied outcomes for national security. He worked in the Senior Executive Service for the U.S. Department of Homeland Security and U.S. Department of Defense, running chemical and biological defense programs that protected military personnel overseas and people at home from disease threats. Rudolph began work in biodefense at the Defense Advanced Research Projects Agency; there, he led some of the nation’s first programs in diagnostics for pandemic diseases.



STATE sat down with Rudolph to discuss CSU outbreak research.

STATE: What are some of CSU’s key initiatives and assets in infectious disease research?

RUDOLPH: We’re known for amazing entrepreneurship and ingenuity, but sometimes the need for capital investments can be limiting. So we’ve challenged people and said, “We’re going to give you seed funding and work with you to make something impactful that will really move the needle.” We’ve made strategic hires, for instance in leadership of our Infectious Disease Research Center and One Health Institute, to help take ideas off the bench, into scale, and into commercial activity.

New vaccines and therapeutics start with lab research, and we have a tremendous asset in our Infectious Disease Research Center, one of the nation’s secure Biosafety Level-3 facilities, where scientists safely examine some of the most contagious diseases, including COVID-19.

We created the Catalyst for Innovative Partnerships to incentivize interdisciplinary research – bringing together researchers working on global concerns. One research team is mimicking natural ecosystems to examine how infectious pathogens move among different species, exactly the information we need to understand the novel coronavirus. We launched a new Program of Research and Scholarly Excellence called Infectious Disease Research and Response. Recognizing the need for building shared assets and opportunities, we formed the Coalition for Epi-Response Engagement and Science, known as CERES, a consortium of six land-grant universities, all leveraging assets on outbreaks that impact agriculture.

To bring innovations in infectious diseases to market, we established BioMARC in 2006 with federal and state funding. It’s a unique manufacturing facility working on both human and animal vaccines and other countermeasures.

STATE: How does your office connect CSU to COVID-19 research priorities?

RUDOLPH: Faculty are the driving force of a top-tier research university – they form new ideas and apply for grants to fund those ideas. Our office works to support and accelerate that process. What investments can we make in facilities and faculty to enrich CSU opportunities? What partnerships do we pursue?

At the start of the pandemic, we invested widely in response, including investing in a high-capacity disease surveillance instrument to boost faculty research. Surveillance in a pandemic, especially during cold and flu season, is like looking for a zebra in a herd of horses. So you want a much wider capability to sample people with symptoms and identify what diseases they may have

been exposed to. That’s one example of how we deployed internal R&D funds to prime activities around the spectrum of needs for COVID response. Our investigators are leading more than 100 COVID-19 projects in all eight colleges – creating a heightened innovation ecosystem in public health in Colorado.

STATE: Some scientists are projecting vaccine availability by the end of the year. At the same time, CSU researchers have four vaccine projects underway. Why is this research important, even if someone else gets to the vaccine finish line first?

RUDOLPH: This work raises the visibility and impact of a whole set of post-pandemic countermeasures, including vaccines. It is all about providing solutions to an unprecedented need for immunizing our planet. CSU is unique in that we can go all the way from the bench into the arm. We are in a marathon to find a suitable vaccine and collaborate widely, even as we pursue our own solutions.

STATE: What do you view as the biggest challenges ahead in infectious disease research?

RUDOLPH: We need massive infrastructural investments in public health, with attention to increased frequency of disease outbreaks and pandemics. Surveillance is a critical component of enhanced resilience – the first line of defense. Future problems could come from anywhere in the world, so we must improve international and national partnerships and information systems that provide early warnings and vigorous, agile responses to prevent the significant health and economic consequences of an outbreak of this magnitude.

STATE: During the pandemic, concerns have intensified nationwide about race, equity, and justice. How does this relate to research?

RUDOLPH: We know diversity and innovation are inextricably linked. We’re putting out a call to our faculty to stimulate new actions directed at racial equity. We are also working to ensure that, if we are successful in the clinical development of our vaccine candidates, they are distributed to reach under-served populations.

STATE: How has COVID-19 changed your perspective of CSU’s research?

RUDOLPH: I’m inspired by how quickly our research enterprise engaged to take action on the COVID crisis. The land-grant ethos of local discovery leading to regional and global impacts has certainly been reinforced for me. ■

Cara Neth and Coleman Cornelius produced this report.

Photograph by John Eisele / Colorado State University

THE TOGETHER INITIATIVE

What can we all do together? ● Attend and speak at public meetings. ● Run for an open leadership position. ● Host thought-provoking book readings and discussions. ● Organize small-business support days. ● Organize a conversation with law enforcement. ● Organize a conversation to discuss systemic injustices. ● Vote in your state and national elections. ● Host a letter-writing event to your elected officials. ● Meet with organizations to learn about their stories, their concerns, and their strategies of engaged citizenship. ● Graduate! ● Organize and mobilize residents to vote. ● Write your own book. Read it to others. ● Write your own song. Sing it to others. ● Take a class on public speaking. Practice with others. ● Meet with civic leaders to discuss the structural design of our criminal justice system. ● Correct the narratives that leave out the robust truth. ● Learn the story of someone different from you. ● March. Sit. Stand. Kneel. Use your voice to speak for the unheard. ● Understand that we cannot all play the same role in our collective revolution for change, but we all have a role to play. ● Say their names. ● It can't be just about today. It must be about every day – together.

CSU football player AJon Vivens addressed teammates as they recently rallied for change with coaches and staff in Old Town Fort Collins. Opposite: These actions are the basis of the Together Initiative. Photo: CSU Athletics

ACTION ITEMS

INITIATIVE SUPPORTS BLACK ATHLETES AND PUSHES FOR CHANGE

Lasting societal change begins with actions big and small: earning a degree as a start to professional leadership, calling out a racist joke, joining a challenging conversation – and listening.

These and other concrete steps toward racial equity are the aim of the Together Initiative, launched in early June by Colorado State University Athletics and its Student-Athlete Advisory Committee.

The initiative arose as part of nationwide protests against police brutality and a new wave of urgent calls for the dismantling

of systemic racism, ignited by the death of George Floyd in late May; the Black man was killed by police officers in Minneapolis. The incident, and subsequent demands for change, amplifies the crisis wrought by the coronavirus pandemic.

“Right now is the time to stand up,” the Student-Athlete Advisory Committee proclaims on the Together Initiative website. “In order for our community to genuinely grow, we cannot be non-racist. We must actively seek to be anti-racist.”

The proclamation is signed by hundreds of people in CSU Athletics and the broader campus community – including

coaches, student-athletes, administrators, and support staff – who publicly commit to more than 20 actions essential to righting longstanding injustice. Those endorsing the project represent different generations and races, a notable aspect of the Black Lives Matter movement invigorated this summer.

“I am proud of our students and staff for their involvement. Everyone recognizes that meaningful change requires consistent, ongoing effort,” Athletics Director Joe Parker said.

The actions are meant to be ongoing – not a one-and-done checklist – and to have a cumulative effect, said Albert Bimper Jr., an associate professor of ethnic studies who also is as-

sistant vice president for CSU Student Affairs and leader of Student-Athlete Support Services. “The ideas came from conversations with students and staff asking, ‘What do I do? What can we do?’ We’re trying to find better answers than, ‘dialogue.’ This is a starting point. Let’s add to it,” Bimper said.

“For Colorado State Athletics, ‘together’ will be a word that drives change,” the initiative’s introduction explains. “Together, our commitment to our student-athletes, our university, and our community will grow. We will apply actions to our words, and we will remain steadfast in our belief that all people should be treated as equals – together.” ■ — Coleman Cornelius



[E S S A Y]

A Complicated Relationship

My father has a lead foot. On many family road trips across this country, he would get pulled over and receive a well-deserved ticket. I have a vivid childhood memory of waking up during one such overnight trip as a state trooper pulled him over yet again. I watched as my father politely handed over his license and registration while simultaneously keeping his hand close to the loaded .38 he kept tucked next to his seat. My father is now 89. As a Black illegal immigrant from the West Indies, he grew up in a very different America than I did. In his America, a traffic stop was a life-and-death encounter.

In his America, there was no expectation that the police were there to help you or to be fair to you. In his America, even an Army veteran like him did not expect that his country would treat him like a man. Injustice was the norm, and he faced it down every day. He taught me how to live in America based on those experiences.

He taught me I would always have to fight for what was mine. He taught me that the system, and its enforcers, would actively oppose me. He taught me to fight for my life every day. Thankfully, and most importantly, he taught me that my faith and my education would be my greatest weapons.

I am a man. I am a Black man. I am a Black man in America. I am a Black man in America who holds a position of relative authority and privilege. All of these things are true, and all of these things hold meaning

for me, especially at this moment in time. I love this country. America has afforded me the opportunity to worship as I please; to get a college degree and a law degree. In America, I have been able to earn a living, marry the girl of my dreams, raise two beautiful children, and participate in the civic and cultural life of my community.

But also in America, I have been spit on, called a nigger, harassed by the police, denied opportunities, and watched Black friends and loved ones systematically jailed, impoverished, and dehumanized.

My relationship with America is complicated; I am outraged by injustice but never surprised by it. I celebrate what is good about America, but I never forget the lessons my father taught me.

My son is 12. He thinks he lives in a different America than the one experienced by his father and grandfather. In his America, school and church are multicultural experiences. In his America, he thinks he can trust the system; after all, the system (K-12 education) in which he has spent the majority of his life, was run by his father. In his America, he thinks things will be fair and just.

Today, I must break his heart by teaching him the name and story of George Floyd. I have to teach my son the lessons my father taught me so that in the future he can be outraged at injustice, but not surprised and paralyzed by it.

I share my American experience not because my story is special or unique but be-

cause, as a leader, I think those around me have some right to know the lens through which I see the world and make decisions. I am challenged by the recognition that every decision I make is about resolving the duality between living in the greatest country on Earth and living in an America that cruelly and intentionally dehumanizes and discards people based upon the color of their skin.

I am moved by both Lee Greenwood and Gil Scott-Heron. I see no conflict in expressing gratitude for the military and in supporting Colin Kaepernick. At its core, the American Dream is about freedom; to paraphrase Nelson Mandela, true freedom cannot be experienced unless you “live in a way that respects and enhances the freedom of others.”

To me, the movement we are seeing today and the work I am committed to is about true freedom and the desire we should all share to live in an America where there is no duality; an America which is the same for all of us and for all our children. ■

Rico Munn, J.D., is superintendent of Aurora Public Schools and past chair of the Colorado State University System Board of Governors. He leads a partnership between Aurora Public Schools and CSU Global to enhance educational opportunities for students and professional development for school district employees. This essay was first published in the Aurora Sentinel and is reprinted with the author's permission.

By Rico Munn / Photograph by Mary Neiberg

[ESSAY]

From Dirt

bloom how you must i say

— Lucille Clifton

For months now, I've been living through the grief of deaths, devastation, and debilitating disease. I am naming none of these things in an abstract, global sense, though they are pervasive conditions of our times. I am talking about the deaths of family, the failure of this country to provide safety to dear friends. I am talking about grief and exhaustion and autoimmune flares that make it difficult, daily, to get out of bed. I'm talking about seeming to run out of prospects. But, this week, we pulled several cubic feet of rock from our yard. Now the soil is ready to receive pole beans a friend gifted me last summer, beans from a line of seed passed on by survivors since the 1838 Trail of Tears. Soon, I will make a space in my garden for something that will look, by autumn, like edible hope.

I'm getting ahead of myself. Working the land, I am always losing track of a linear concept of time. What happens today is fed by what I did yesterday. What I reap in the fall will recollect decisions made by the likes of Dr. John Wyche — the man who began to send out these heirloom Cherokee seeds to whomever showed interest and sent postage — in a decade I was nearly too small to remember and which my daughter calls the olden days.



If we were to start from the start, where would that take us? Black-eyed peas, a staple food in West Africa, made the journey with enslaved people from that continent into the American South. In their book, *In the Shadow of Slavery:*

Africa's Botanical Legacy in the Atlantic World, scholars Judith Carney and Richard Nicholas Rosomoff tell us that these same people used the stimulating kola nut to manage the fetid water they were given on slavers' ships. Later, that nut would make a key ingredient for Coca-Cola. When I speak about garden-variety crops in this country, I nearly always point toward simultaneous legacies of trauma and triumph. Watermelon, sorghum, millet, sesame seed, rice: None of these would be what they are in America were it not for the centuries of human trafficking we call the slave trade. The stories I've received tell me some ancestor must have kept seed for okra in her hair through the long trial of the Middle Passage and onto,

then *into*, American soil. She must have secured raw peanuts in an unsearched scrap of cloth she kept near her body. Peanuts, like pole beans, like black-eyed peas, are both food and seed. You can eat them for power today or plant them for

By Camille T. Dungy / *Photograph by Mary Neiberg*



The stories I've received tell me some ancestor must have kept seed for okra in her hair through the long trial of the Middle Passage and onto, then into, American soil. She must have secured raw peanuts in an unsearched scrap of cloth she kept near her body. Peanuts, like pole beans, like black-eyed peas, are both food and seed. You can eat them for power today or plant them for abundance tomorrow. People who came long before us carried the source of a new kind of flourishing through desolation most of us care not to fully comprehend. If I say my garden's story starts with the planting of a seed, to which seed am I referring?

abundance tomorrow. People who came long before us carried the source of a new kind of flourishing through desolation most of us care not to fully comprehend. If I say my garden's story starts with the planting of a seed, to which seed am I referring?

I remember the first garden I planted as a married woman. It wasn't much to speak of, neither the garden nor the house in whose yard it was sown. The garden was a way to help me feel rooted in a place where we were struggling to begin our new life. I planted a few, sturdy starts: marigolds and nasturtium. I put in zucchini, mostly for the riot of its bright blossoms. I kept an artichoke for the same reason. The thistle flower delighted me, though it attracted an army of ants that quickly moved the artichoke beyond the possibility of human consumption.

Even if I had managed to harvest anything during our brief season in that house, I shouldn't have trusted the food that dirt produced. Fumes from the nearby freeway drifted over us all night and all day. Anytime they were touched, flakes of paint flew from the Victorian duplex's exterior walls. Soil tests in the area have revealed lead levels hundreds of parts per million above what is deemed to be safe, and I hadn't built raised beds. Still, I wanted to witness a plan come into fruition. I planted seeds, I planted starts, I watered, and I weeded, and I watched. I could say that my efforts were futile, but I won't. There had been little but dirt in that yard before I started digging. For the few months we lived in that house, we got to walk outside each day and appreciate a kind of flowering.

Not too long ago, I shared a few hours with a Salvadoran poet who walked across the desert into the U.S. when he was 9 years old. There is a great deal of hardship in his story. The landscapes he's walked across have delivered incredible pain. And yet, as we talked about the importance of writers of color celebrating the living world,

he found himself recalling his grandmother's garden. There was joy there, he insisted. He wouldn't let his charge to document suffering stop him from recalling this pleasure.

There is sustaining power to be generated from claiming even complicated beauty as a peace we are entitled to enjoy.

Once, as I dug in dirt contaminated with legacy pollutants, a local nursery's discounted flowers in their black plastic pots nearby, a woman from the neighborhood stopped to watch me. Why would I bother to tend such a yard, she wanted to know. I remember feeling angry that she didn't believe our block, our rented house, deserved such a demonstration of care. I know it might take a lot of work, I told her, but I want to grow something beautiful.

On the property of Thomas Jefferson's retreat home, Poplar Forest, archeologists have discovered caches of food that give insight into the diet of the enslaved men and women who lived on that property. The very produce of the earth has provided a lasting record of who on that land had what type of access, autonomy, and power. The list of

foods found in the storage pits reveals the epidemic of deprivation endemic to the institution of slavery – but it also reveals the strategies of a people insistent on nourishing themselves.

Archeological studies suggest that the people at Poplar Forest grew corn in their gardens. They probably grew sunflowers, mint, sweet potatoes, and violets. They might have grown the violets and sunflowers as ornamentals, but just as likely, they were using them for food. The violets could be a kind of replacement for okra and greens. Even the ornamental plants around the quarters were provisions the people who tended the land could eat. I like to think that the people appreciated looking at these plants as much as they appreciated knowing they could depend on



them for physical sustenance when need arose. Archeologists have found the remains of wheat, oats, rye, sumac, blackberry, purslane, pigweed, poppies, and more. The people raised chickens, whose eggs they could sell, which they also might have done with some of the other produce from their gardens. But Jefferson made sure his son-in-law “put an end to the cultivation of tobacco” by the people he called property, who were growing it in their gardens. “There is no other way of drawing a line between what is theirs and mine,” Jefferson admitted in a letter, than to forbid these men and women from growing for personal use the same crops they cultivated in his fields. Don't think I don't have histories like this in mind when I insist on growing what I please in the soil that surrounds me. There is power to be generated from cultivating whatever might sustain me, in whatever way I wish.

I grow sunflowers and sweet potatoes in my own garden. I plant what plants I desire, and I harvest or not as I choose. I grow mint and tolerate the purslane people these days tend to weed. As we learn in Lucille Clifton's poem “mulberry fields,” sometimes unmastered growth reveals what it is our land most dearly needs. I grow poppies and let the wild violets flourish, for, through their flowering, time will progress.

It's been nearly a decade since I dug in the particular patch of dirt our neighbor questioned, but I still regularly encounter incredulity when I talk about coaxing beauty out of the legacy pollutants that haunt us every day. Not too long ago, a woman asked me how I could fancy myself an environmental writer when I write so much about African American history.

For a breath or two, I was speechless. I'm not sure I understand how it would be possible to talk about history without taking into account the environment out of which our history springs.

Living in the body I live in, I can't help but see the direct implications, the devastating implications, of the erasure of certain histories. When you dismiss lives from the record, you put those lives in jeopardy. There is a reason that freeways were so frequently run through one part of town (the Black part of town) and not others. The reason is because the lives and the property of those who lived in that part of town were not valued as highly as others. The pollution of that indifference persists in the very ground people walk on today. Writing about the environment is a necessary political decision, just as finding a way to beautify the patch of dirt we called home was a necessity in that first house my husband and I shared. It is also why, once the ants announced their interest in the artichoke, I let them

enjoy its substance while I settled for appreciating its splendor. I was not dependent on that artichoke for its nutritional value, and if my point is to see to it that things around me thrive, sharing with ants could be part of this goal. I refuse to take part in the segregation of the imagination that assigns greater value to some experiences than it assigns to others. If there is to be a flourishing that I can cultivate, I want its reach to be wide.

In our current yard, near where I'll grow the Cherokee Trail of Tears pole beans, there is some rhubarb that has greeted me each spring since we moved into this house. Rhubarb is a tricky plant, scorned by many but by others fiercely loved. The nontoxic stems of the plant are fibrous and nutritious, containing useful medicinal characteristics. For our contemporary taste, these stems are bitter. We typically add quite a bit of sugar to help the medicine go down, converting what might be considered a vegetable into something we use in simple syrups, cakes, and pies. Who were the people who put in this rhubarb? There is nothing else like it in the yard. The people who lived here before us poured river rock over most of the other patches that might have made a garden. But the rhubarb, in its 3-square-foot bed, comes back each year to remind me of something. What? Where there appears to be only dirt, there may be the root system of some kind of insistent thriving.

I never know how much I need to see that rhubarb unfurling until it begins to unfurl. Rhubarb may lack the power to cure what truly ails this world but, I am thankful, it brings me back to the recognition of wonder and of beauty; and that is not a gift to be dismissed. This year, for the first time, the rhubarb burst into flower. The many-headed bracts look like ten thousand snowflakes held firm on summer branches. I am supposed to lop off the flower heads to encourage the edible stalks to keep growing. They'll go dormant sooner if I leave

these bold bids for pollination, and the plant will be of no practical use to me. But these enormous flowers are so lovely. I find it practical, as a matter of survival, to seek evidence of the wild wonder of the world. In this summer's full blooming, it's as if the joy I glean in this garden has erupted over every inch of my life. ■

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[ESSAY]

The Freedom Tree

On the eve of my parents' marriage, my mom's father offered my dad a blank check to call off the wedding and leave the state. My grandfather could not fathom his white daughter from rural Montana marrying a Black man from Jamaica. Much to the dismay of my white future family members, my dad did not take the bait. Five years later, I was born.

My white grandparents later realized our Blackness did not make us less human, and their perceptions about their Black relatives slowly shifted. But my brother and I were the only Black students in our schools while growing up in northwestern Montana, and I had to learn to navigate a daily onslaught of racial slurs, physical retaliation, and microaggressions from my community. The many recent examples of violence committed on Black bodies have reopened my own wounds and serve as reminders for all of us about injustices Black communities have faced since the time our ancestors were dragged here in chains.

Growing up, my survival and healing technique of choice was silence. I chose silence not to preserve bigots' inaccurate perspectives; rather, I chose to bite my tongue and grit my teeth for my own safety. I recognized that saying the wrong thing to a racist with a gun could mean a death sentence without a trial, like that imposed on so many nonthreatening Black men.

With the opportunity to attend Colorado State University Pueblo came the maturation of my convictions and an understanding of the evolution, rather than the end, of Jim Crow. In his 1943 poem "Freedom's Plow," Langston Hughes asks us to be patient and keep working so the tree of freedom will grow to provide shade for all of those in the United States. With the brutal murder of George Floyd, our nation has begun to realize the tree of freedom has been neglected, and the status quo accepts that strange fruit will still be hung from trees of inequity.

However, with purposeful change, the trauma of many Black people in America may finally be heard. Entrenched racism must be disassembled, so the freedom tree can flourish to grant all Americans freedom and justice.

CSU Pueblo is part of a wider university System proclaiming opportunities for all. Yet these claims must not be shallow or disingenuous and must be followed by action. The university and System must recognize and state the damage of institutionalized, systemic racism in all facets of our society, including education; the results are found in an embarrassingly long list of lynched Black people. We must agree Ahmaud Arbery, Breonna Taylor, and George Floyd died doing things – like exercising, sleeping in their own bed, and sitting in their car – that only those with privilege can enjoy without fear for themselves or their families.

Before the slaughtering of Ahmaud Arbery, running was a joy that filled part of my day. But now, lacing up my shoes to go for a run is anxiety-provoking, and this activity that I once loved leaves me uneasy.

As a first-generation college graduate, poised to begin studying at Harvard Medical School, I am one of the few who overcame some of the obstacles purposefully embedded into the system to suppress people from my background. At every step up in my education, I have acknowledged that my presence is an act of resistance. Now, I recognize my silence has made me complicit in neglect of the freedom tree.

In writing this, I am breaking my silence to join new calls for change – so that those from Black and Brown communities, who are often condemned to disproportionately poor health and economic outcomes, may have a chance to live in the America that was promised in our founding documents. ■

Derrick Williams graduated summa cum laude from CSU Pueblo in 2018, with a bachelor's degree and a master's degree in biology. He earned the university's top academic honor, in addition to multiple awards as a student-athlete and captain of the university's cross country and track and field teams. He will begin studies at Harvard Medical School in August.

By Derrick Williams / Photograph by Mary Neiberg





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