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## Seek: research magazine for Kansas State University. [Introductory matter] Spring 2022

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Rosowsky: Seek: research magazine for Kansas State University. [Introducer

# Seek

RESEARCH MAGAZINE FOR KANSAS STATE UNIVERSITY

SPRING • 2022

ECO

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## Behind the code

Researchers tackle the new world of cybersecurity

## Balancing act

Sustaining our future across disciplines

## The new normal

Analyzing the ever-changing economy

## A wave of natural color

Natural fibers and dyes come together to create the stunning colors of these fabrics, which are made of a linen and rayon blend.

Kansas State University researchers fashioned the vibrant colors of these fabrics using dried cochineal insects, marigold heads, madder plant roots and coreopsis flower heads.

Researchers in the interior design and fashion studies department are making textile production more sustainable by using flowers, plants, nut hulls, sawdust, tree bark, food waste and leaves to naturally dye fibers instead of using synthetic dyes. Typically, natural dyes are used on natural fibers such as wool, silk, soy, cotton, linen and hemp.

See page 20 to learn more about the natural dyes and other sustainable research across a variety of disciplines.





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Analyzing the ever-changing economy



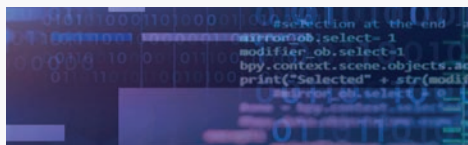
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or at Kansas State University's  
New Prairie Press, [newprairiepress.org](https://newprairiepress.org).



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### About Seek

Seek is Kansas State University's flagship research magazine and invites readers to "See" "K"-State's research, scholarly and creative activities, and discoveries. Seek is produced by the Office of the Vice President for Research and the Division of Communications and Marketing.

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**KANSAS STATE**  
UNIVERSITY

I am both excited and proud to share this latest issue of Seek magazine with you, highlighting just some of the research, scholarly work and creative activity at Kansas State University. K-State is a leading land-grant university, a public research university with rich history of exceptional teaching, research and service to Kansans and to Kansas. It is through our research and discovery that we make our greatest impact. We create new knowledge and new understanding. We change minds and we change the world. We facilitate learning, discovery and engagement through our research. And we help to shape a future that is more secure and more sustainable.

K-State is also an economic engine for Kansas and has been for generations. With the launch of our **Economic Prosperity Plan** for Kansas in December 2021, we boldly and intentionally committed to extending our treasured land-grant mission to explicitly include economic development. Research and economic development go hand in hand. Whether basic — fundamental — research or applied research, lab-based or field-based, physical or computational, incremental or transformational, the value of research lies in its *impact*. Indeed, this is the best destiny of any great research. Impact can take many forms, from extending the state-of-the-art and changing our understanding of the world in which we live, to the creation of new technologies, products and companies. I invite you to learn more about our **Economic Prosperity Plan** and how we are leveraging the research, expertise and facilities at K-State to help create jobs and attract new investments into our state.

As always, we highlight research activity across the entire university in Seek magazine. However, in this issue you will also notice references to the different parts of our **Economic Prosperity Plan**: food and agriculture systems innovation, digital agriculture and advanced analytics, biosecurity and biodefense and K-State 105: Every Town to Gown, which seeks to connect our economic development work to all 105 counties in Kansas.

This issue of Seek includes expansive features on research — being conducted by faculty members and faculty teams that cut across departments and colleges — in sustainability, cybersecurity, digital humanities and our nation's economy. This issue also includes features describing two of our many important research centers, the Chapman Center for Rural Studies and the Johnson Cancer Research Center. And as always, we feature a graduate scholar and undergraduate scholar and their research. Finally, we share a recent example of a technology transfer/economic development success story.

Please enjoy this beautiful new issue of Seek and thank you for your interest, your engagement and your support of research at K-State. We are proud to be Kansas' land-grant university, a great public research university, an engine of discovery and economic development and a point of pride for Kansans.

D. Rosowsky, Vice President for Research

### ➤ Seek more

Learn more about the Economic Prosperity Plan.

[k-state.edu/economic-prosperity](https://k-state.edu/economic-prosperity)