Updates from the STRIPS Project

Omar de Kok-Mercado

100% crops

90% crops: 10% prairie

100% prairie

Images: Jasper Co., Jose Gutierrez

Sources: Zhou et al. 2012, Helmers et al. 2012, Hernandez-Santana et al. 2013, Iqbal et al. 2014, Mitchell et al. 2014, Zhou et al. 2014

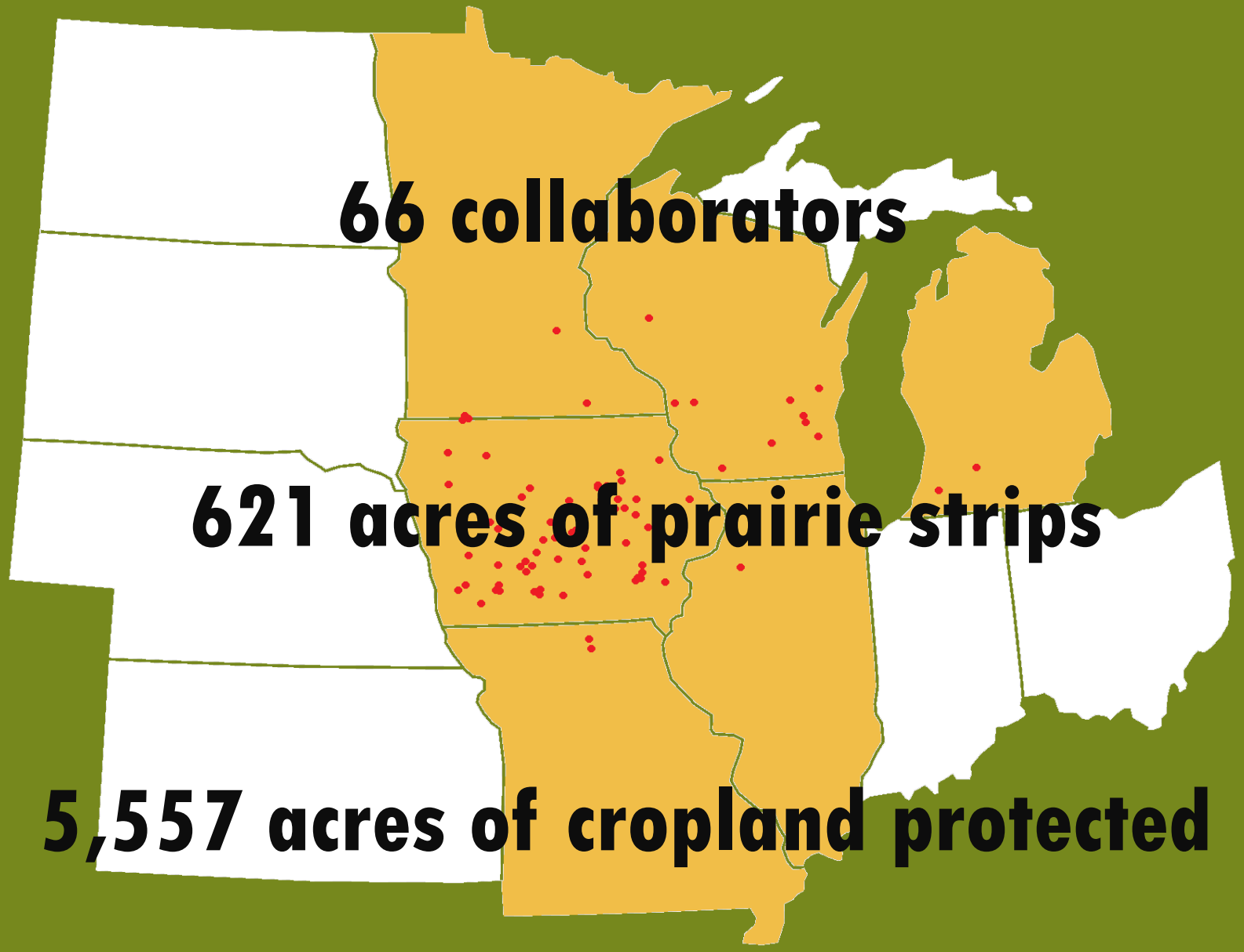
What are prairie strips?

erosion control

improve water quality

provide wildlife habitat

save $$$ on low-yielding acres



66 collaborators

621 acres of prairie strips

5,557 acres of cropland protected

Soil
Water
Plants
Pollinators
Vertebrate Wildlife
Farmer Adoption
Economics
Antimicrobial Resistance
Microbial Degradation

Soils Research

Spatio-temporal effects on soil health
-Cole Dutter and Marshall McDaniel

Microbial degradation of neonicotinoids
-Corinn Rutkoski and Nick Haddad

Soil movement
-Jessica Nelson and Matt Liebman

Nutrient retention
-Matt Helmers and Chris Witte

Erosion modeling
-Rick Cruse and Brian Gelder

Pollinator Research

Honey bee survivorship
-Adam Dolezal and Ed Hsieh

Neonicotinoid residues
-Maura Hall, Joel Coats, Steven Bradbury

Forage resources and bee populations
-Ge Zhang, Ashley St. Clair, Amy Toth

Monarchs
-Caroline Murray and Matt O'Neal

Vertebrate Wildlife Research

Image: Matt Stephenson

Habitat quality and nest survival

-Matt Stephenson, Lisa Schulte Moore, Bob Klaver

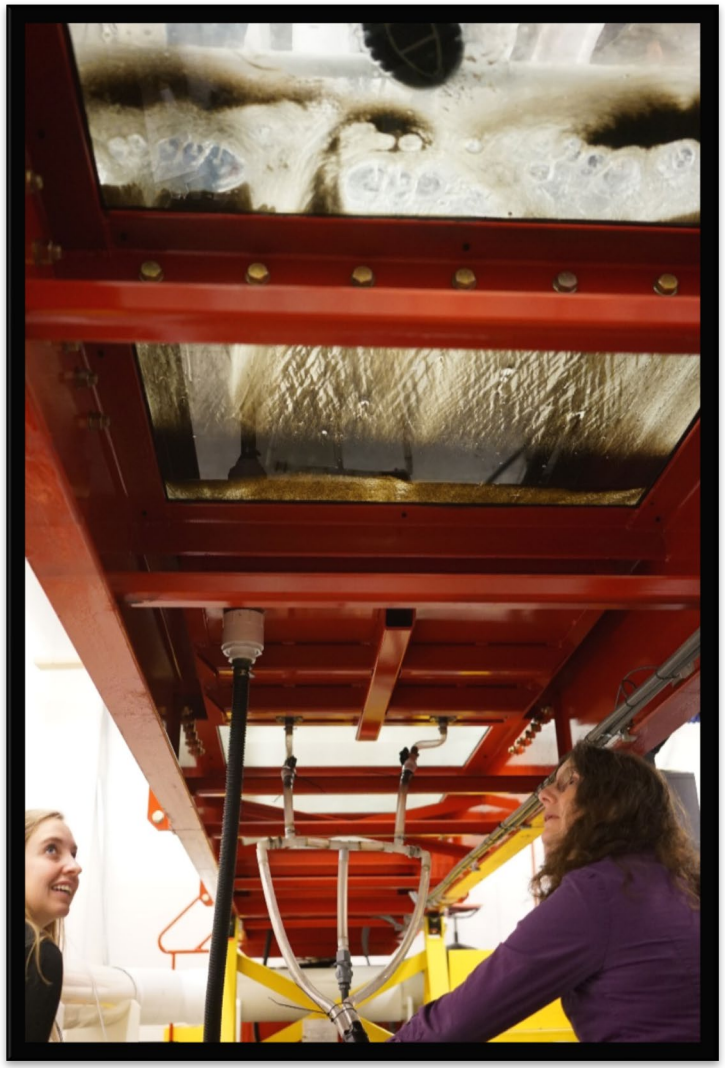
Snake and small mammal occupancy

-Matt Stephenson, Lisa Schulte Moore, Bob Klaver

Avian response to prairie strips

-Jordan Giese, Lisa Schulte Moore, Bob Klaver

Antimicrobial Resistance Research



Resistance genes

-Jared Flater, Laura Alt, and Adina Howe

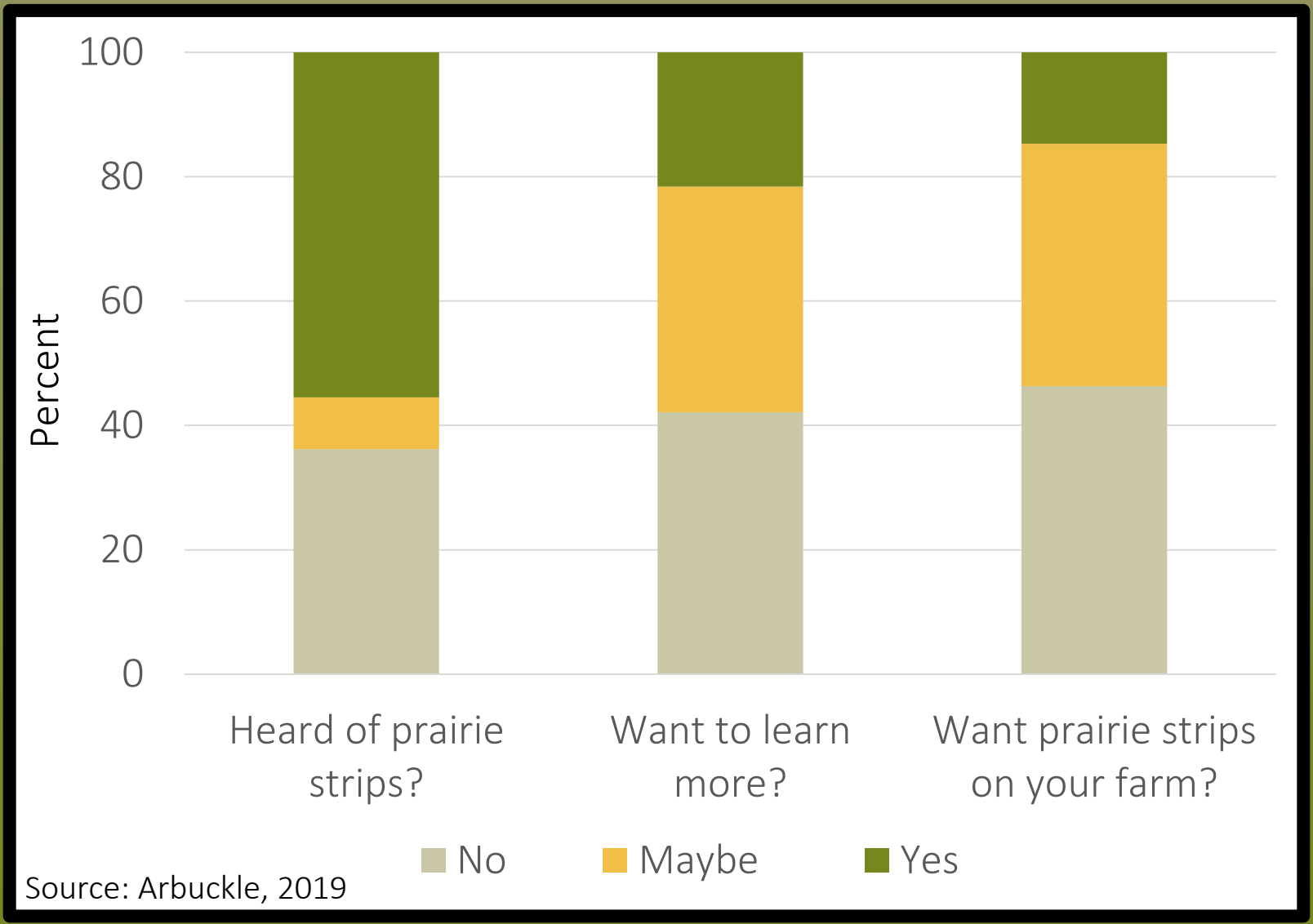
Hydraulic flume

-Andrew Craig, Michelle Soupir and Chris Rehmann

Incubation

-Alyssa Iverson, Michelle Soupir and Adina Howe

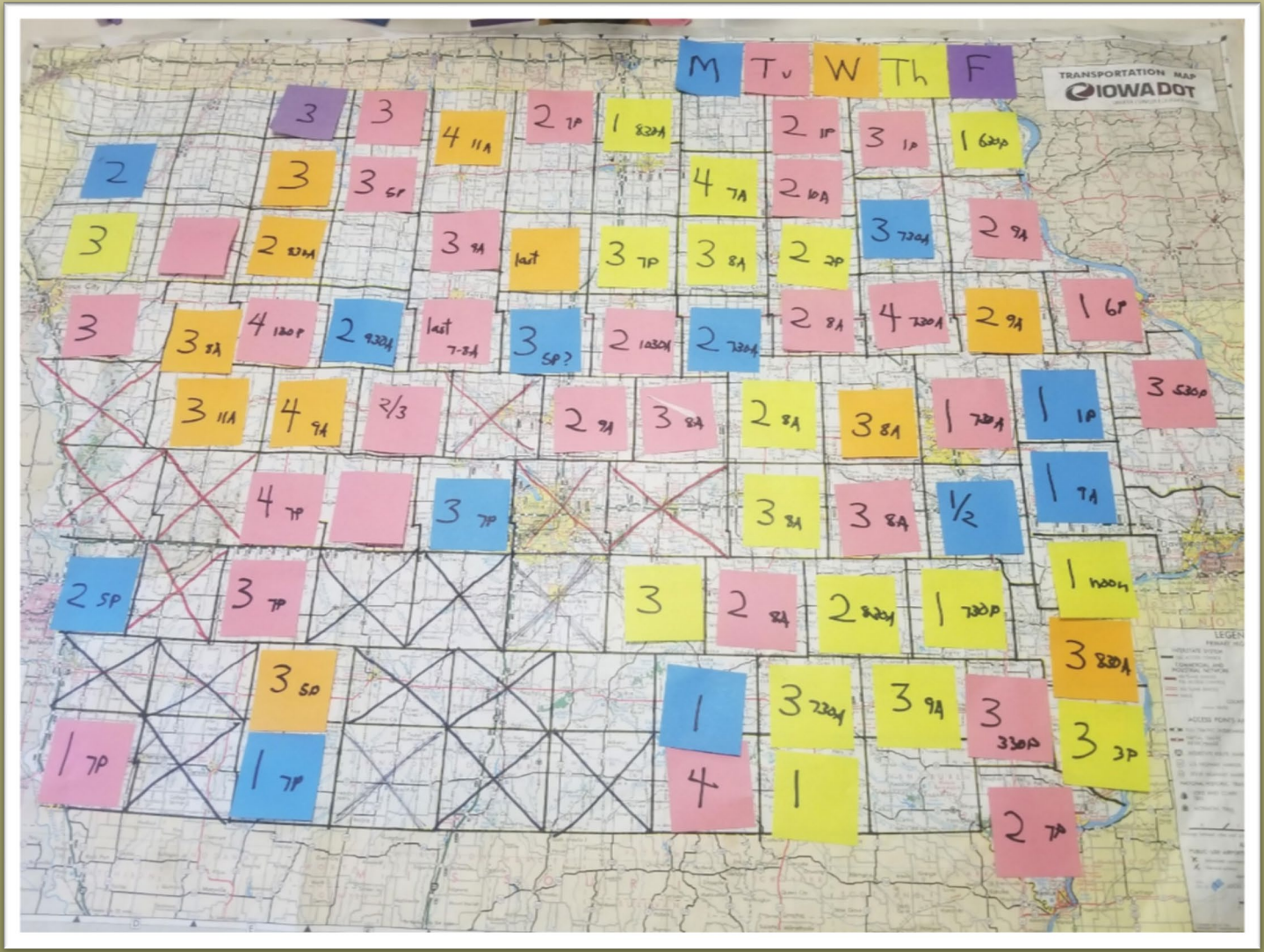
2018 Farm Poll Survey Data



Source: Arbuckle, 2019

-J Arbuckle

Communications At-Large



-Doug Davenport

POTENTIAL PRAIRIE MARKETS
Agriculture
Prairie seed, soil regeneration, pest control, pollination, seeds
Biorenewables
Renewable natural gas, biochemicals, biochar, coproducts
Fiber
Pulp and paper, clothing construc ton supply, growth medium
Food & Beverage
Herbs, teas, brewing, distilling
Medicinals & Pharmaceuticals
Echinaceas, antioxidants
cotourism
Hunt, view ildlife, fish, enjoy land scape
Technical Knowledge & Service
Design coordination, establishment,
Livestock
Pasture, hay, bedding
Pollinators
Honey, bees wax, other bee products
Clean Water
Reduced soil erosion prevents runoff
Carbon Storage & Removal
Deep prairie roots trap greenhouse gasses

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Iowa State University of Science and Technology

College of Agriculture & Life Sciences

Leopold Center

U.S. Fish & Wildlife Service

Forest Service U.S. Department of Agriculture

The McKnight Foundation

Iowa Department of Agriculture and Land Stewardship

DNR

Iowa Flood Center

IAWA Iowa Agriculture Water Alliance

The Walton Family Foundation

USDA ars Agricultural Research Service

NIFA

FSA Farm Service Agency

North Central SARE Sustainable Agriculture Research & Education

McIntire-Stennis Program

FFAR

Illinois

NSF

Committee on Agricultural Development

CropLife Foundation

Des Moines Water Works — Water You Can Trust for Life

The Eastern Iowa Airport Cedar Rapids

Missouri Prairie Foundation — Protecting Native Grasslands

Iowa Natural Heritage Foundation

Iowa Soybean Association

Nebraska

Roeslein Alternative Energy, LLC

Sand County Foundation

Tallgrass Prairie Center — Restoring a National Treasure

Trees Forever — Planting a better tomorrow

USGS — science for a changing world

Valley Stewardship Network — Partners in stewardship of land and water

Whiterock Conservancy

Bayer

Corteva agriscience

Smithfield

syngenta Global

Michigan State