### NCAR CLIMATE & GLOBAL DYNAMICS

## **CGD Seminar Series**

# Adapting agriculture to climate change

### **Nathan Mueller**

#### Colorado State University

Date: Tuesday 20 October 2020 Time: 11am – 12pm For Zoom information, please contact Tracy Baker <u>tbaker@ucar.edu</u>

For live stream information, visit the CGD Seminar Webpage

#### ABSTRACT

Climate change threatens agricultural livelihoods and food security around the world. Yet impacts are determined not only by changes in climate, but also the ways in which agricultural systems respond and adapt. This presentation will propose that we can separate agricultural adaptation into three different modes: in situ adaption (i.e. changes in on-farm management), adaptive migration, and changes in infrastructure and support systems. I will explore these modes by providing evidence for historical adaptation and by prioritizing future adaptation needs. Case studies will examine in situ adaptation in US maize and dairy systems, global patterns of adaptive migration for major staple crops, and global water management needs due to changes in snowmelt

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