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# Nudge to Insure: Exploring Behavioral Economics in PRF-RI and WFRP Participation

Kelly Davidson (University of Delaware) and Brittney Goodrich (Auburn University)

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Kansas City, MO

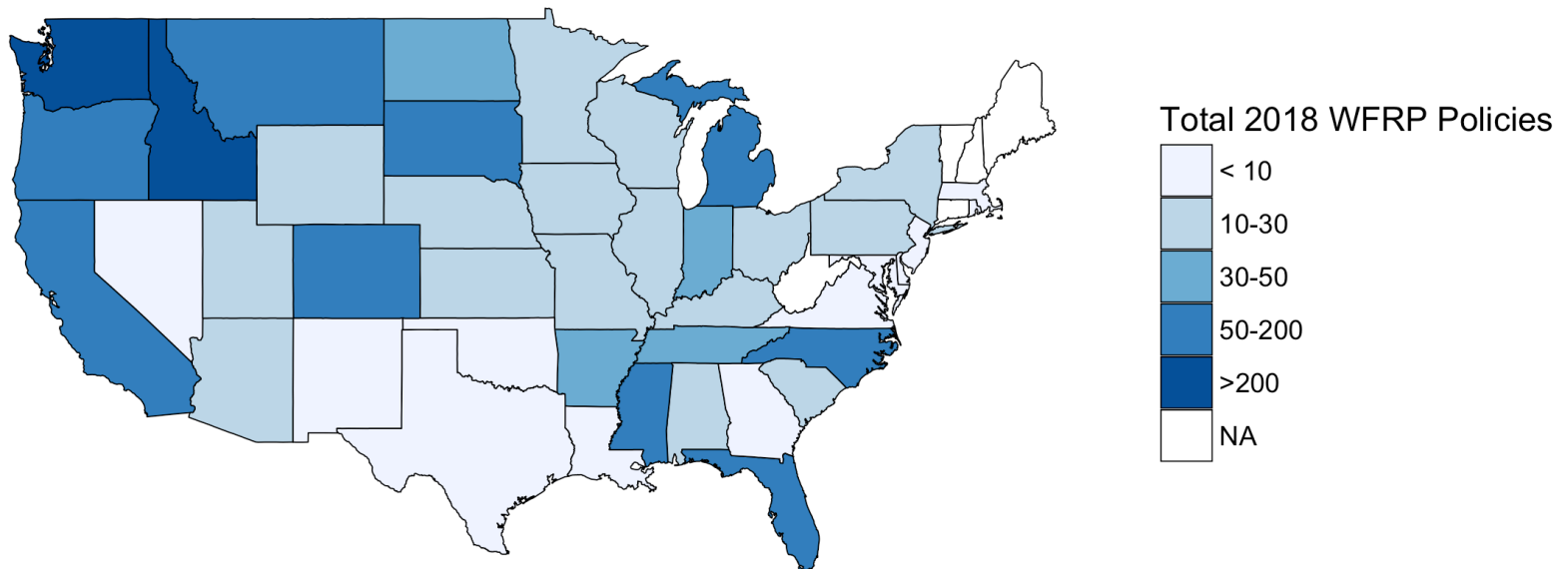
# Motivation

- Traditionally specialty crop and livestock producers underserved wrt crop insurance products
- Two products currently available meet this need
  - Whole Farm Revenue Protection (WFRP)
  - Pasture, Rangeland and Forage Insurance (PRF) for livestock producers
- WFRP and PRF have low rates of enrollment despite large subsidies
  - Especially in parts of eastern U.S.
- Objective: Can we use tools/knowledge from behavioral economics to influence insurance decisions?

# What is Whole Farm Revenue Protection?

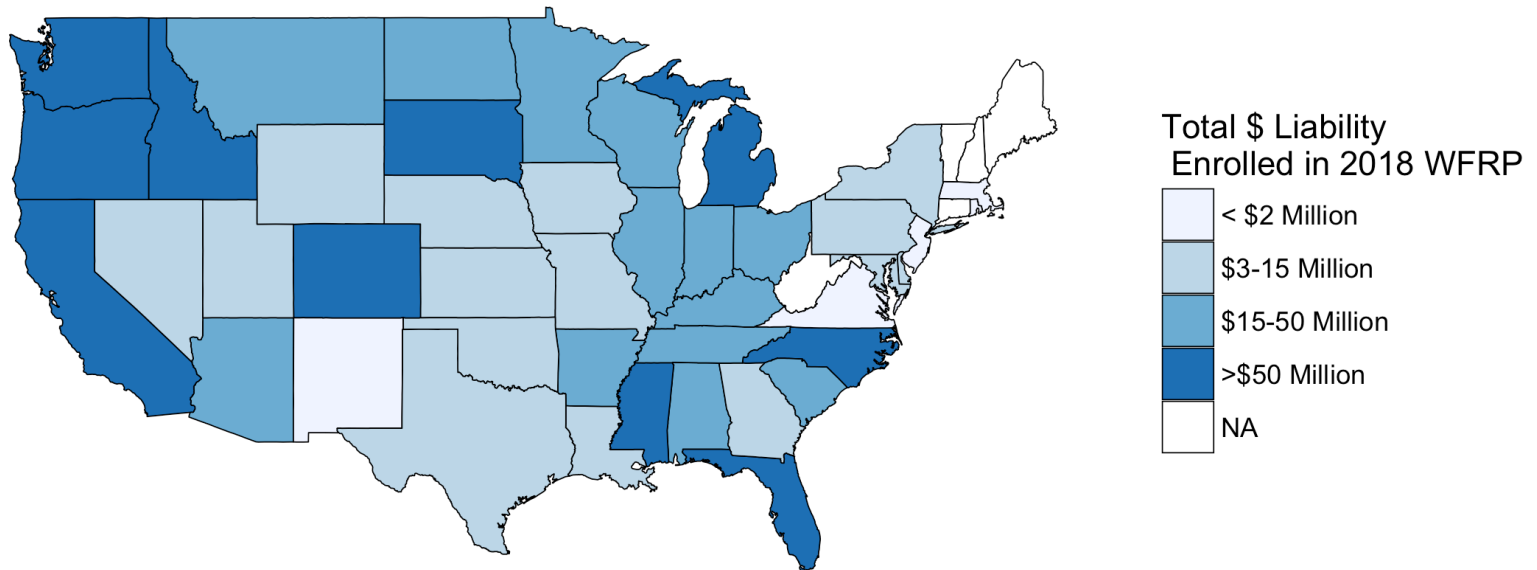
- WFRP: Crop insurance policy to cover all commodities on one farm
  - Stand alone or in addition to standard crop insurance
- Helps specialty and diversified farms receive coverage
  - Allows coverage of traditionally uninsured items
  - Includes specialty and organic commodities
  - Allows coverage under one insurance policy
- Available in all counties
- Up to \$8.5 million insured revenue

# WFRP Participation



Source: USDA RMA Summary of Business Reports, 2019

# WFRP Participation



Source: USDA RMA Summary of Business Reports, 2019

# Barriers to WFRP-Farmer Perspective

- Not aware
- Difficulty in understanding WFRP
  - How can WFRP be used with existing crop insurance?
- Too costly
  - Thinks farm not large enough to be advantageous
- Does not fit their operation
  - Other crop insurance products better serve needs
- Reluctance to share tax info
- Worried about WFRP covering growing operation

Source: Johnson et al. (2017) *"New Option for Farm Risk Management: Whole Farm Revenue Protection Usage in Nebraska"*  
Report Center for Rural Affairs

# Barriers to WFRP-Crop Insurance Agent Perspective

- Agents unfamiliar
  - WFRP policies difficult to write so there is a disincentive for selling
- Crop year vs tax year differences
- Potentially a temporary program
  - Another disincentive for selling/becoming more familiar with policy writing

Source: Johnson et al. (2017) *“New Option for Farm Risk Management: Whole Farm Revenue Protection Usage in Nebraska”*  
Report Center for Rural Affairs



# Benefits to WFRP-Farmer Perspective

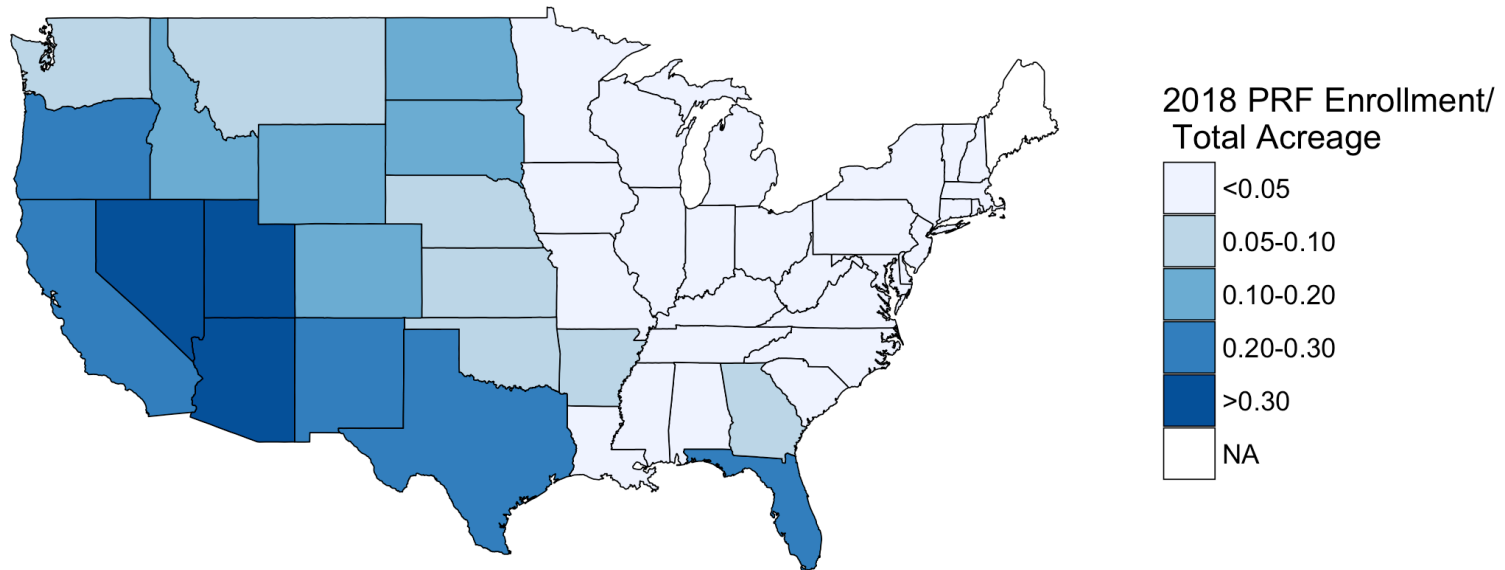
- Increased access to credit
  - Crop insurance often prerequisite for receiving loans
- Experimentation
- Flexibility in conservation

Source: Johnson et al. (2017) *“New Option for Farm Risk Management: Whole Farm Revenue Protection Usage in Nebraska”*  
Report Center for Rural Affairs

# What is Pasture, Rangeland and Forage Insurance?

- Index Insurance for livestock producers to insure against drought-like conditions
- Based on ~12x12 mile grids
  - Rainfall index: Weighted average of 4 closest weather stations to grid
- Guarantee from 70% to 90% of average rainfall
- Policy runs January to December
- Farmer picks months to insure

# PRF Participation



Source: USDA RMA Summary of Business Reports, 2019; USDA Ag Census 2012

\*2018 Enrolled Acreage/ 2012 Ag Land, Pastureland, Hay (Excl Cropland & Woodland)

# Suspected Barriers to PRF Participation

- Not aware
- Can you use with other programs?
  - Livestock Indemnity Program
  - Livestock Forage Disaster Program
  - Emergency Assistance for Livestock, Honey bees and Farm-raised Fish
- Too complicated
- Crop insurance agents unfamiliar
- Policy design issues

# Behavioral Insights

- Information campaigns are insufficient to increase enrollment if potential participants face behavioral or psychological constraints
  - Choice overload
  - Complexity – lack of understanding about costs and benefits
  - Misperception of risk
  - Present bias
  - Contextual cues or channel factors, “Hassle costs”
  - Reference dependence and framing can lead to status quo bias
  - Social comparisons

Source: Baicker et al. (2012) *“Health Insurance Coverage and Take-Up: Lessons from Behavioral Economics.”*  
The Milbank Quarterly, Vol. 90, No. 1, 2012 (pg. 107-134).

# Potential Solutions

- Designing solutions first depends on understanding the barriers
  - Focus group discussions with stakeholders
- Simplified choice/menu
  - Evaluating the PRF decision support tool
  - Default options
- Behavioral nudge
  - Nudge within the decision support tool
  - Enrollment reminders via text message
  - Social comparison – display average enrollment or payout

### Pasture, Rangeland, Forage Support Tool

Grid Locator | Historical Indexes | **Decision Support Tool** | Estimated Indemnities

**Location Information**

State: Alabama | County: Geneva | Grid ID: 13378 | Search By Grid ID:  Enter Grid ID |

**Protection Information**

Intended Use: Haying  
 Irrigation Practice: Non-Irrigated  
 Organic Practice: Not Organic  
 Coverage Level: 85%  
 Productivity Factor: 118%  
 Insurable Interest: 100%  
 Insured Acres: 40  
 Sample Year: 2017

**Policy Information**

County Base Value: \$245.00  
 Dollar Amount of Protection: \$245.74  
 Total Insured Acres: 40  
 Total Policy Protection: \$9,829  
 Subsidy Level: 55.0%  
 Maximum Percent of Value per Index Interval: 50.0%

**Protection Table**

Index Interval	Percent of Value (%)	Policy Protection Per Unit	Premium Rate Per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Estimated Indemnity
Jan-Feb	N/A	\$0	13.07	\$0	\$0	\$0	178.1	\$0
Feb-Mar	N/A	\$0	9.49	\$0	\$0	\$0	64.0	\$0
Mar-Apr	30	\$2,949	15.24	\$449	\$247	\$202	45.0	\$1,388
Apr-May	N/A	\$0	17.10	\$0	\$0	\$0	102.8	\$0
May-Jun	40	\$3,932	12.22	\$480	\$264	\$216	150.1	\$0
Jun-Jul	N/A	\$0	8.82	\$0	\$0	\$0	111.1	\$0
Jul-Aug	30	\$2,949	8.90	\$262	\$144	\$118	91.6	\$0
Aug-Sep	N/A	\$0	9.27	\$0	\$0	\$0	110.8	\$0
Sep-Oct	N/A	\$0	17.30	\$0	\$0	\$0	145.4	\$0
Oct-Nov	N/A	\$0	19.31	\$0	\$0	\$0	80.4	\$0
Nov-Dec	N/A	\$0	15.14	\$0	\$0	\$0	33.9	\$0
Per Acre	N/A	N/A	N/A	\$29.81	\$16.39	\$13.40	N/A	\$34.69
<b>Total</b>	<b>40</b>	<b>\$9,829</b>	<b>N/A</b>	<b>\$1,192</b>	<b>\$656</b>	<b>\$536</b>	<b>N/A</b>	<b>\$1,388</b>

This tool is using insurance data from 2018.  
 This tool is for illustration purposes only. Your actual information may differ.

<https://prodwebnlb.rma.usda.gov/apps/prf>

## Policy Options

Location	Basic	Interval	Percent
County: <input type="text"/>	Coverage: <input type="text" value="90"/>	<input type="text"/>	<input type="text"/>
Grid: <input type="text"/>	Productivity: <input type="text" value="100"/>	<input type="text"/>	<input type="text"/>
Historical Rainfall	Insured acres: <input type="text"/>	<a href="#">+ Add</a>	

Submit



# Evaluating Potential Solutions

- Current research: designing a lab-in-the-field experiment that simulates farmer decisions
  - Measure difference in farmer interest/engagement around WFRP and PRF insurance when exposed to a behavioral nudge
  - Convenience sample of farmers at the Sunbelt Ag Expo
- Hopeful for future research using administrative data to test a nationwide program roll-out

Thoughts?