

# The value of information from USDA's Soybean Rust Coordinated Framework

*What if you build it,  
and rust does not come?*

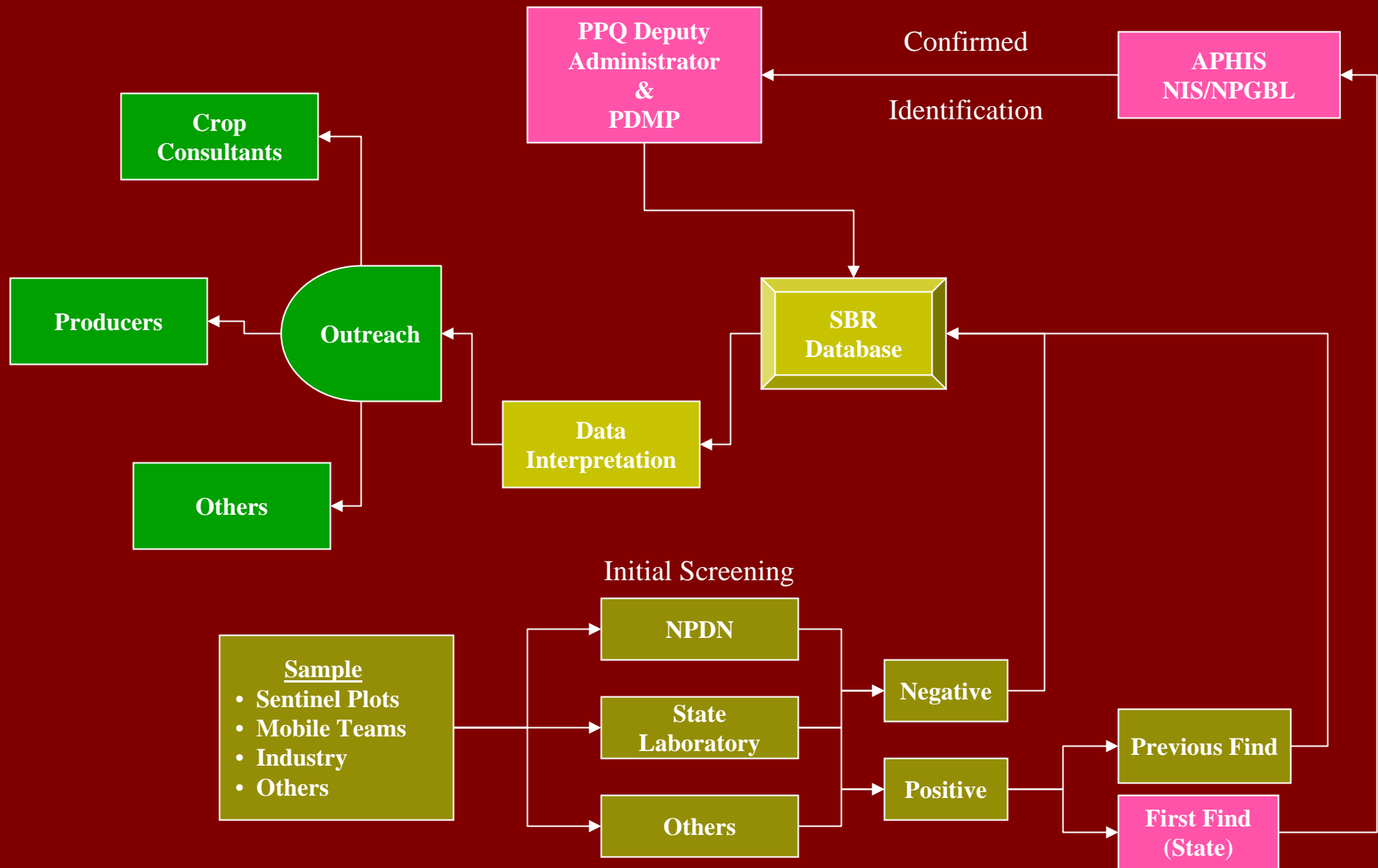
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Nashville -- November 15, 2005

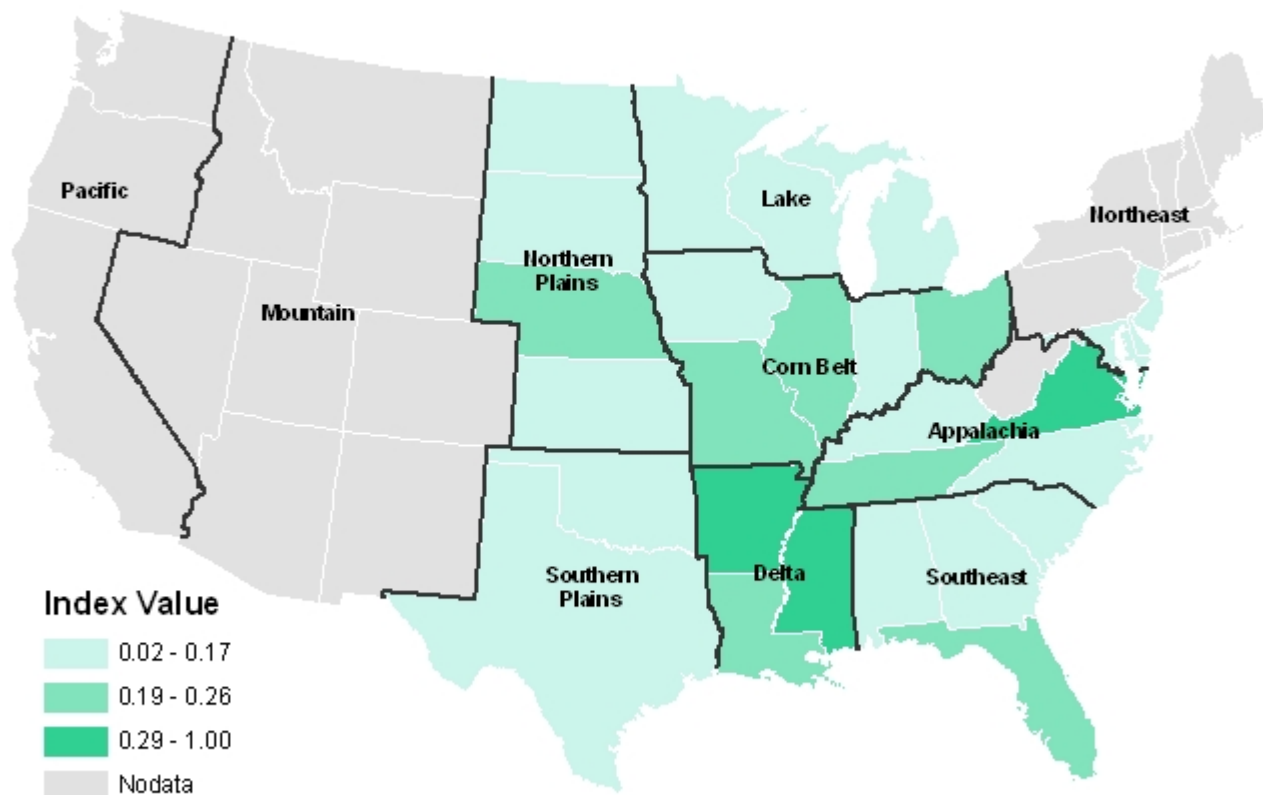
# Motivation

- Value of web-portal information to agricultural producers
  - possible expansion to other crops & pests
- Implications of emergency response to a mild problem

# The SBR Coordinated Framework

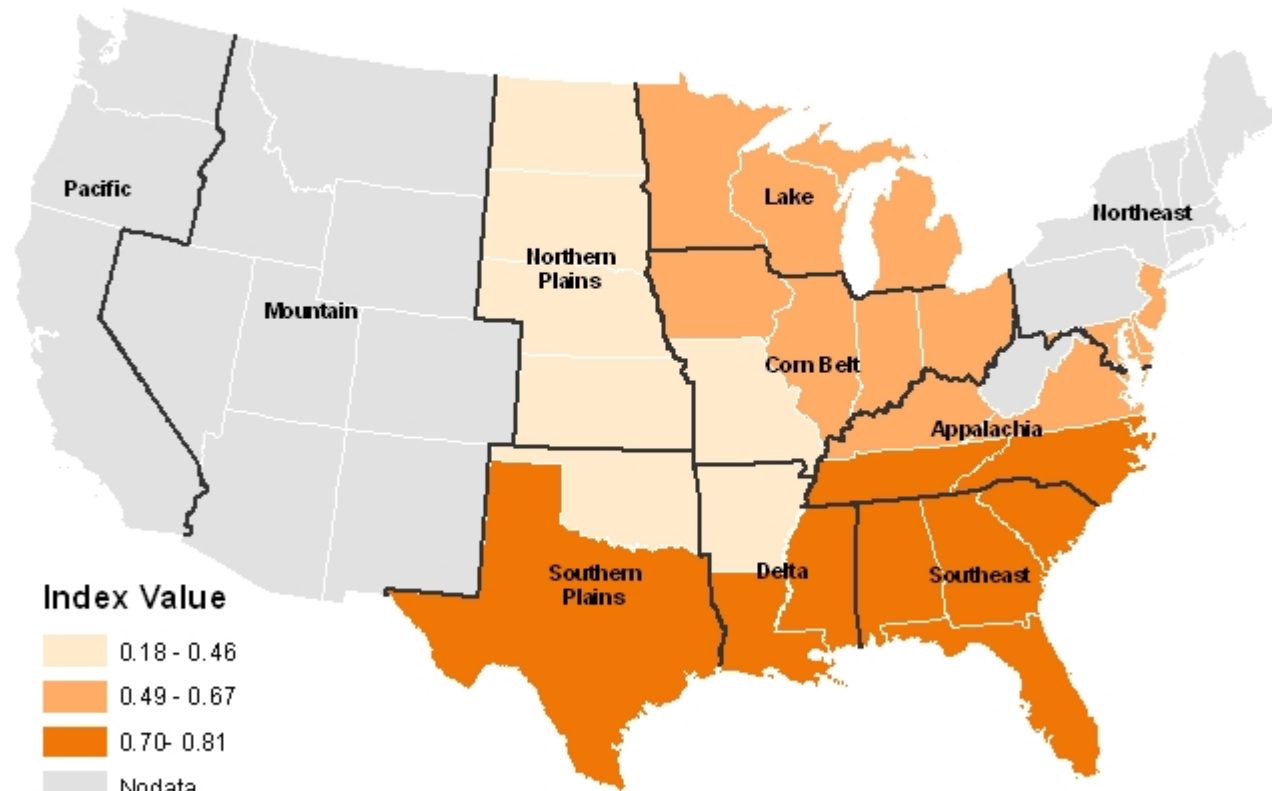


## Coordinated framework Index of Support with USDA Production Regions



Source: Calculated from data provided by GAO

## Prior probability of Soybean Rust with USDA Production Regions



Source: ERS Report, *Economic and Policy Implications of Wind-Borne Entry of Asian Soybean Rust into the United States.*

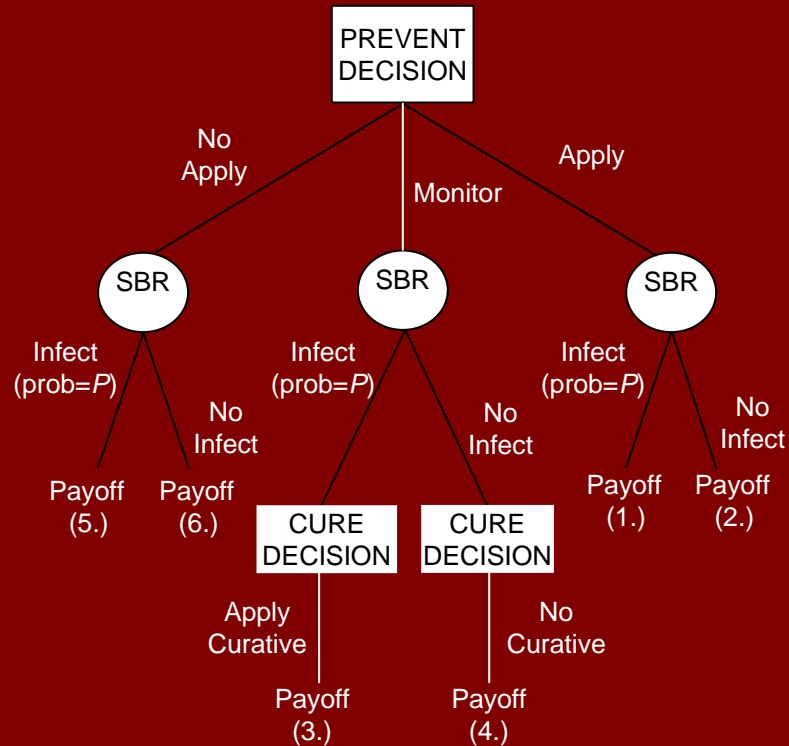
# Key Questions

- How large are the benefits?
- Do producers in different growing areas have different benefits?
- How do risk aversion, price feedback effects, and variation of beliefs within a region influence results?

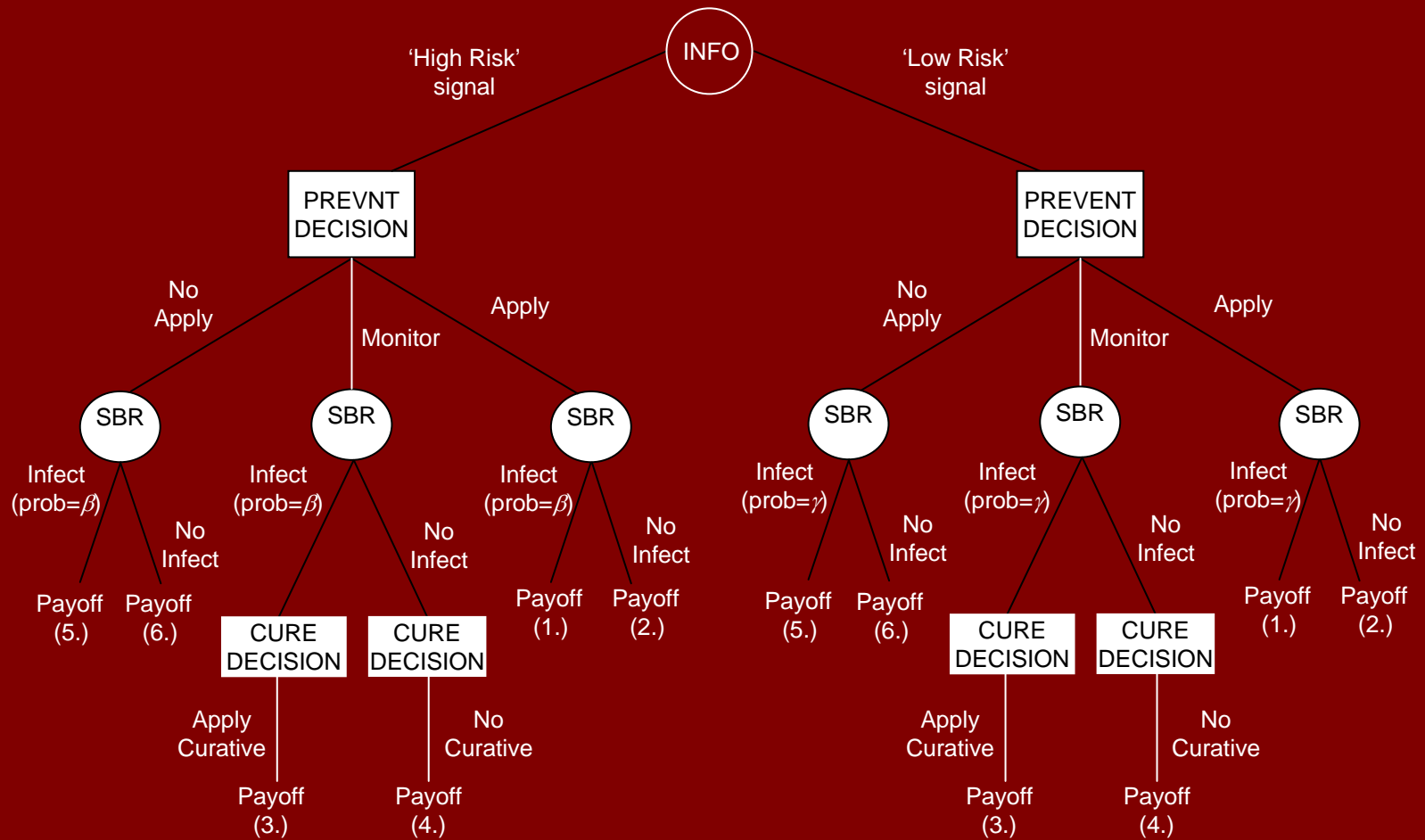
# Possible Outcomes

Decision	SBR Event	
	Infection	No Infection
Apply Preventative Treatment	(1.) 1% Yield Loss, Cost of \$25.63/Acre	(2.) -\$25.63/Acre
Monitor Fields and Apply Curative Treatment if SBR	(3.) 7% Yield Loss, Cost of \$13.81/Acre	(4.) Cost of \$6.71/Acre
No SBR Management	(5.) 25% Yield Loss	(6.) Base Return

# No Information



# Partial Information



# Findings

- Value of information depends most strongly on
  - Information quality (forecast accuracy)
  - Prior beliefs of infection
- Risk aversion, price feedback effects, and heterogeneous beliefs tend to increase lowest values and reduce largest values

# Limitations

- Quantifying information quality and prior beliefs is difficult
  - Survey data may help
- Extending findings to other crops/pests not straightforward, but possibly beneficial on crop-by-crop basis