

# SOCIO-ECONOMICS DESIGNING THE RESEARCH

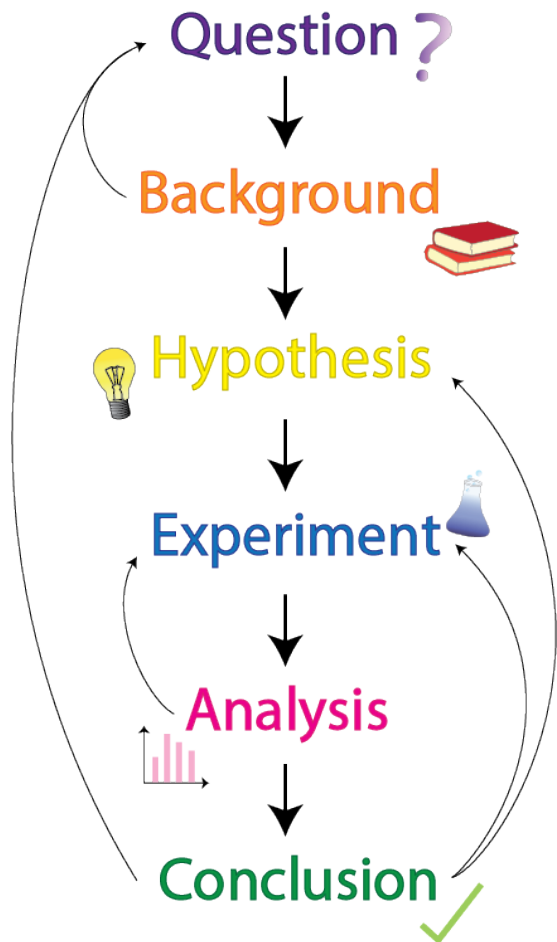
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# SCIENTIFIC METHOD

## The Scientific Method



### 1. Question

How can the uptake of BMPs be increased?

Has Living Lab program increased BMP uptake?

### 2. Background

Previous work: Financial, knowledge, attitudes, norms, ...

### 3. Hypothesis

Uptake influenced by financials, awareness, attitudes, norms, ...

### 4. Experiment

Use survey to assess BMP uptake experience or intention, as influenced by financial, awareness, attitudes, norms, ...

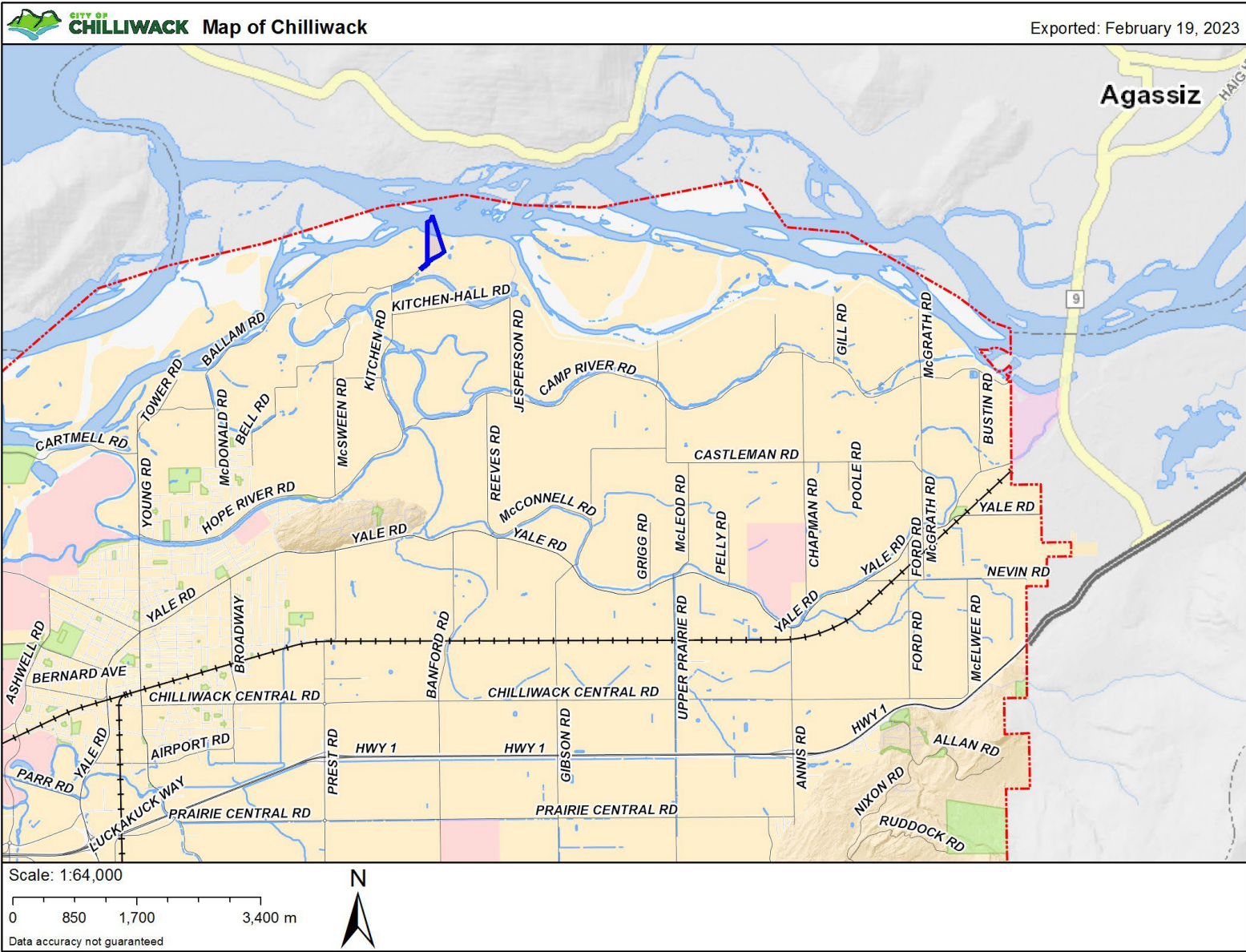
### 5. Analysis

Use statistics to assess influence of financial, awareness, attitudes, norms on BMP uptake experience or intention.

### 6. Conclusion

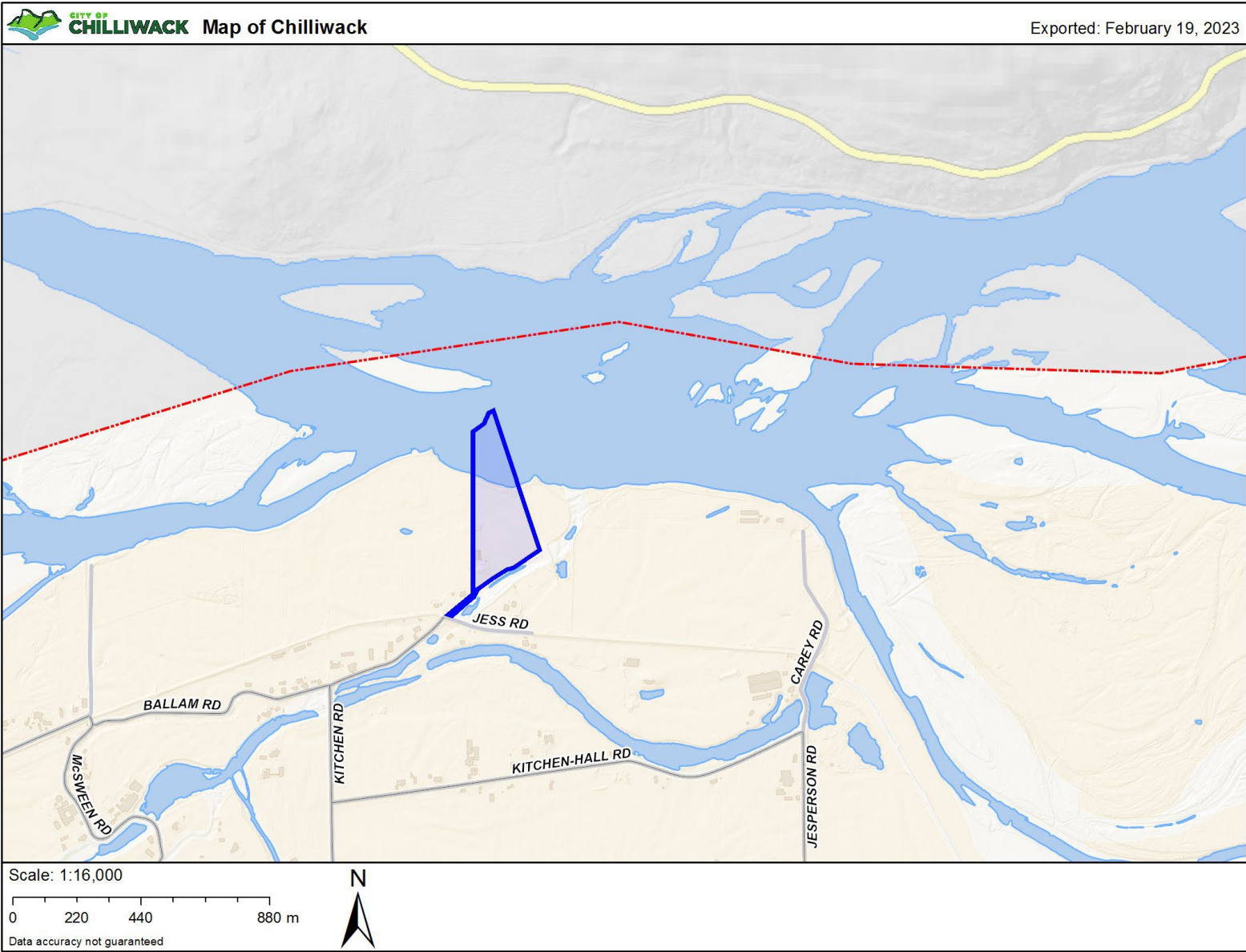


# EXAMPLE





# EXAMPLE

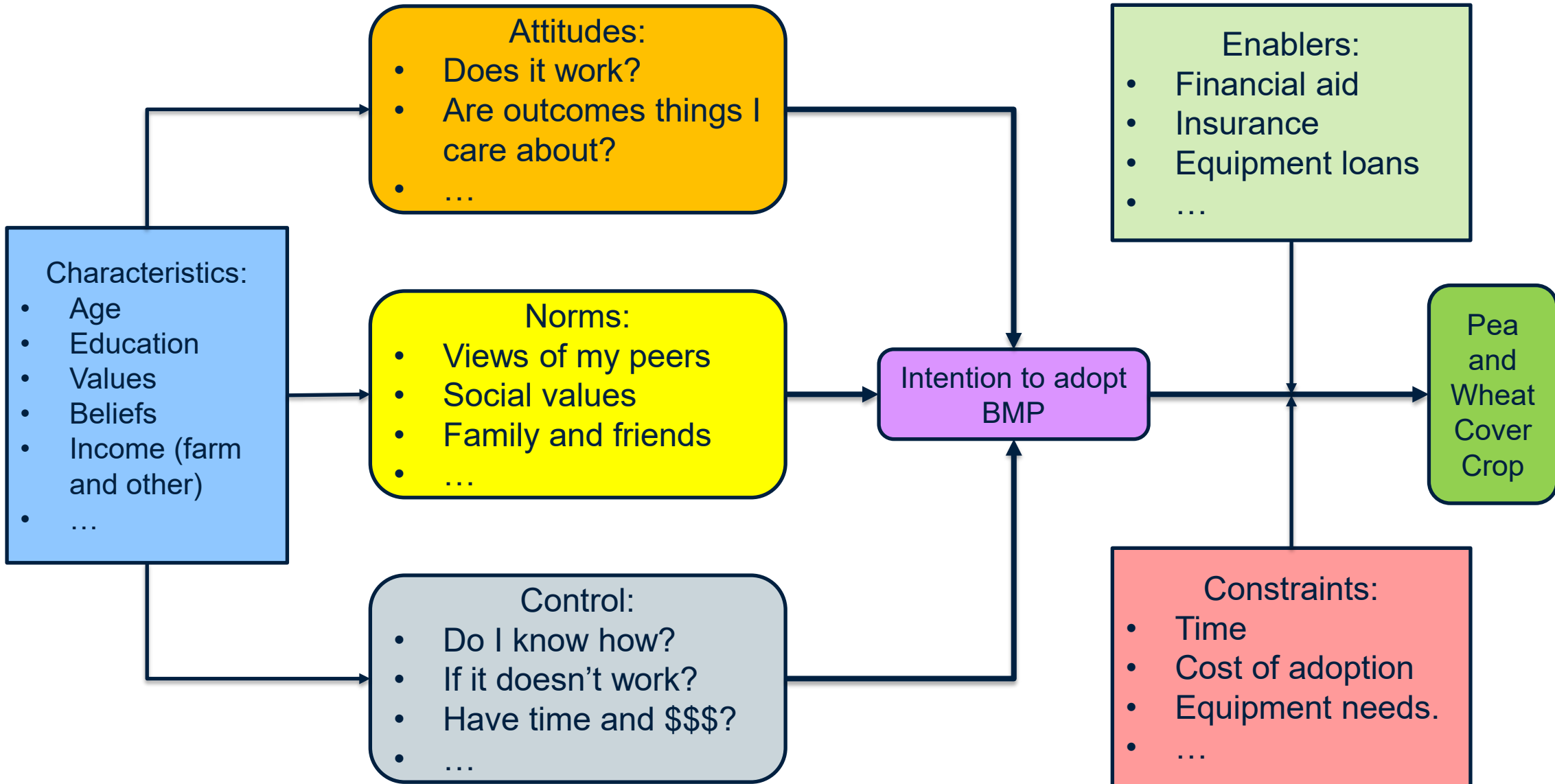


## EXAMPLE

- 1990's, trialed pea and winter wheat cover crop after silage corn on family farm near Chilliwack.
- Promise:
  - Green manure, easy to integrate before next crop, contributes nitrogen.
  - Reduce erosion and capture nutrients with spring manure spreading.
  - High quality silage crop harvested before corn planted.
  - Increased soil carbon not part of conversation in 1990's.
- Experience:
  - Winter arctic blast when cover crop not dormant, serious winter kill.
  - Information gathering time, cost of soil preparation, seeding seed not commonly used, ...
- Result:
  - Return to fall rye.
  - Lower feed quality, harder to work in, but dependable in climate.

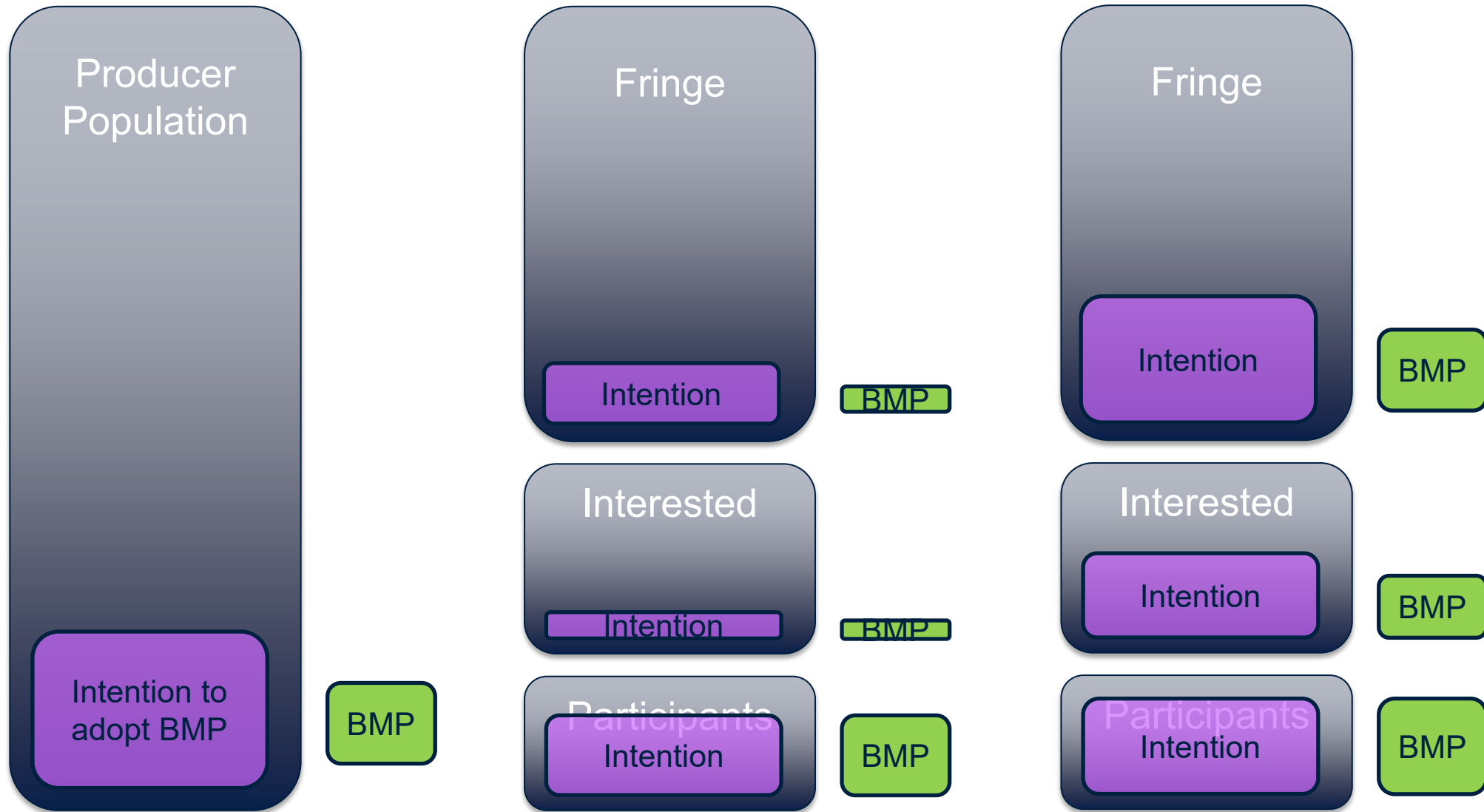


# PREDICTION



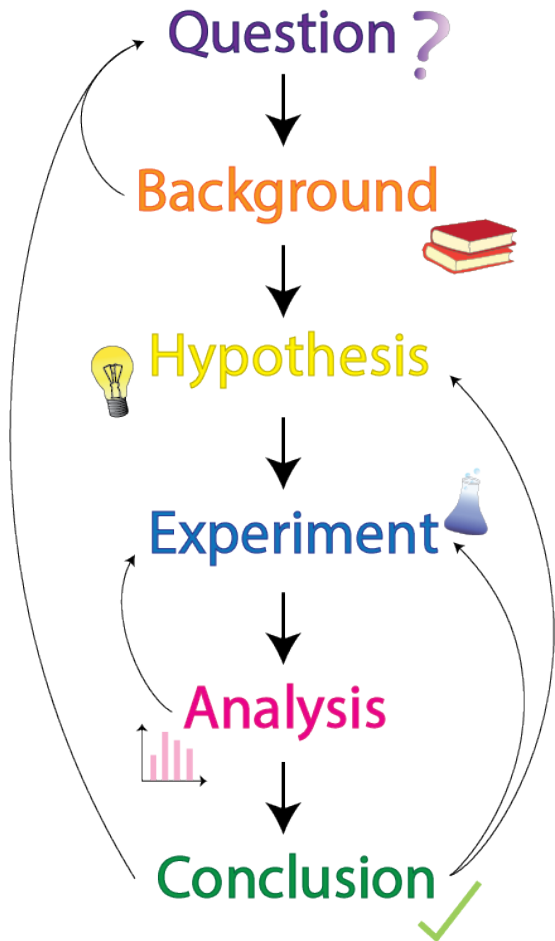


# DYNAMICS



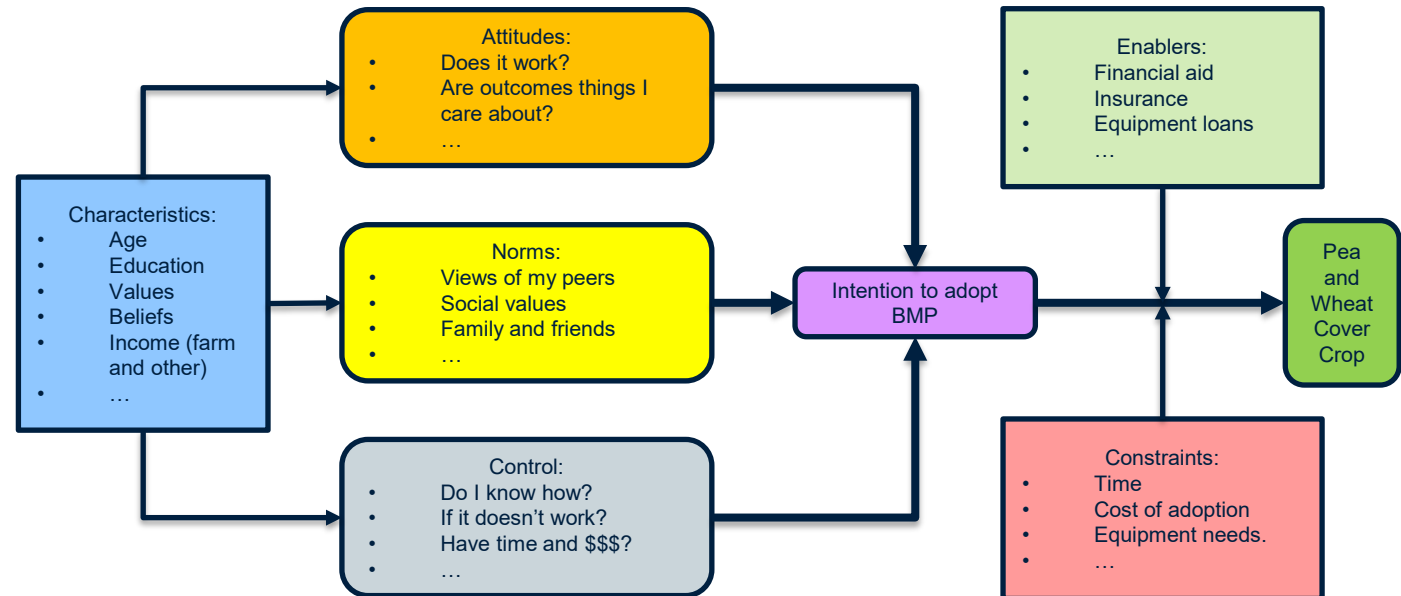
# PREDICTION

## The Scientific Method



## 2. Background

Previous work shows stuff in all boxes matters, but importance varies based on commodity, geography, local culture, ...





PREDICT

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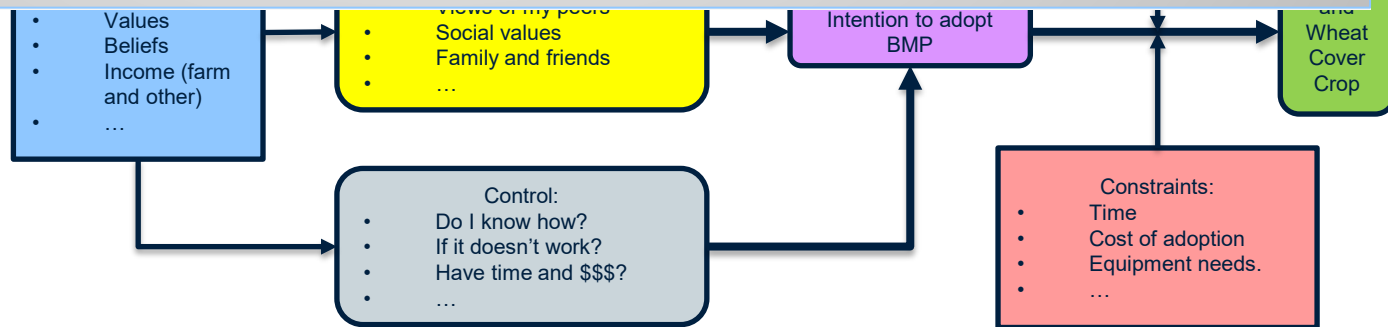
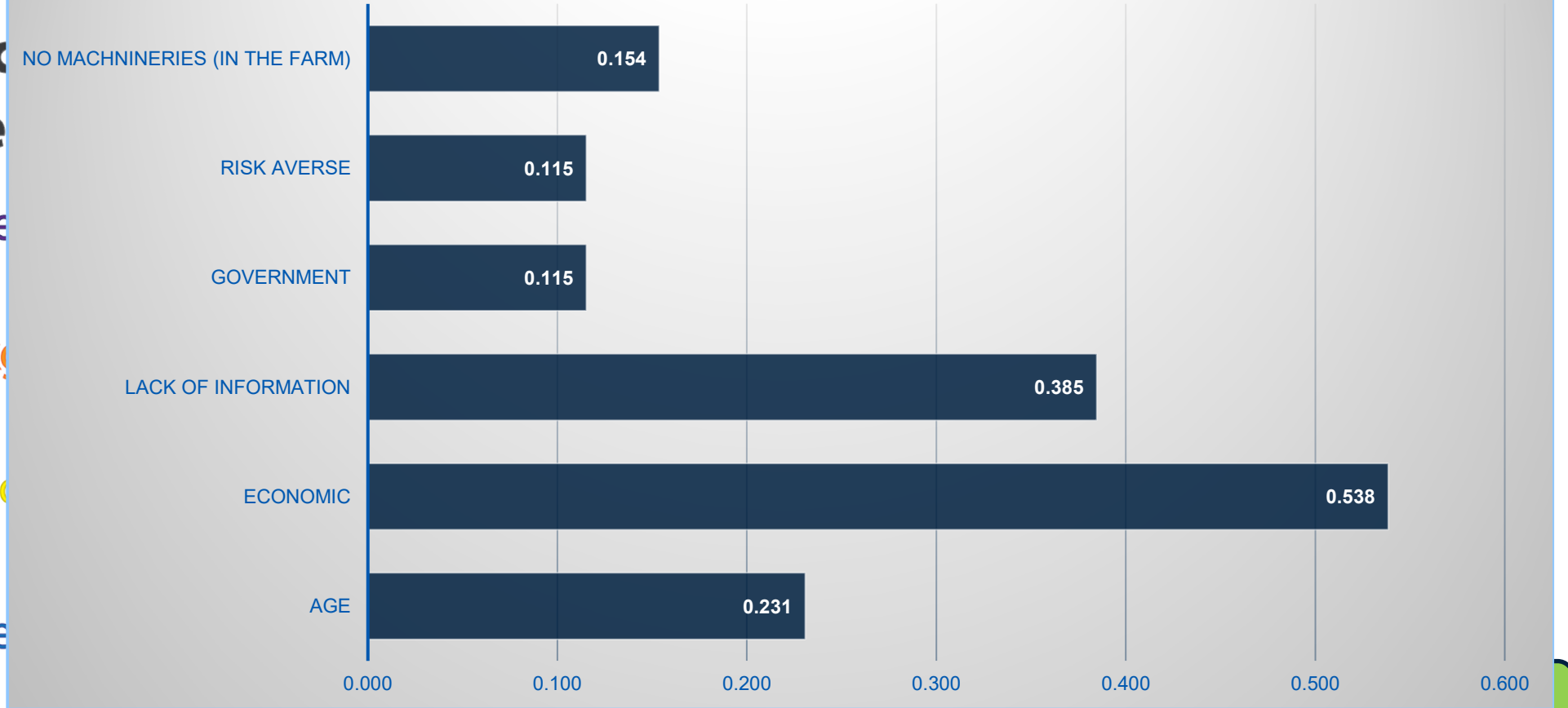
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Analysis

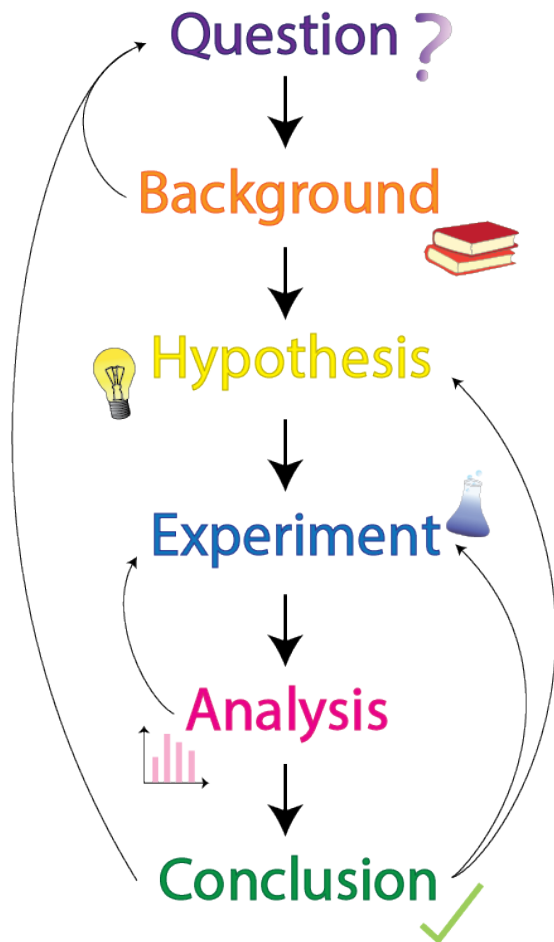
Conclusion

### Barriers p<0.05



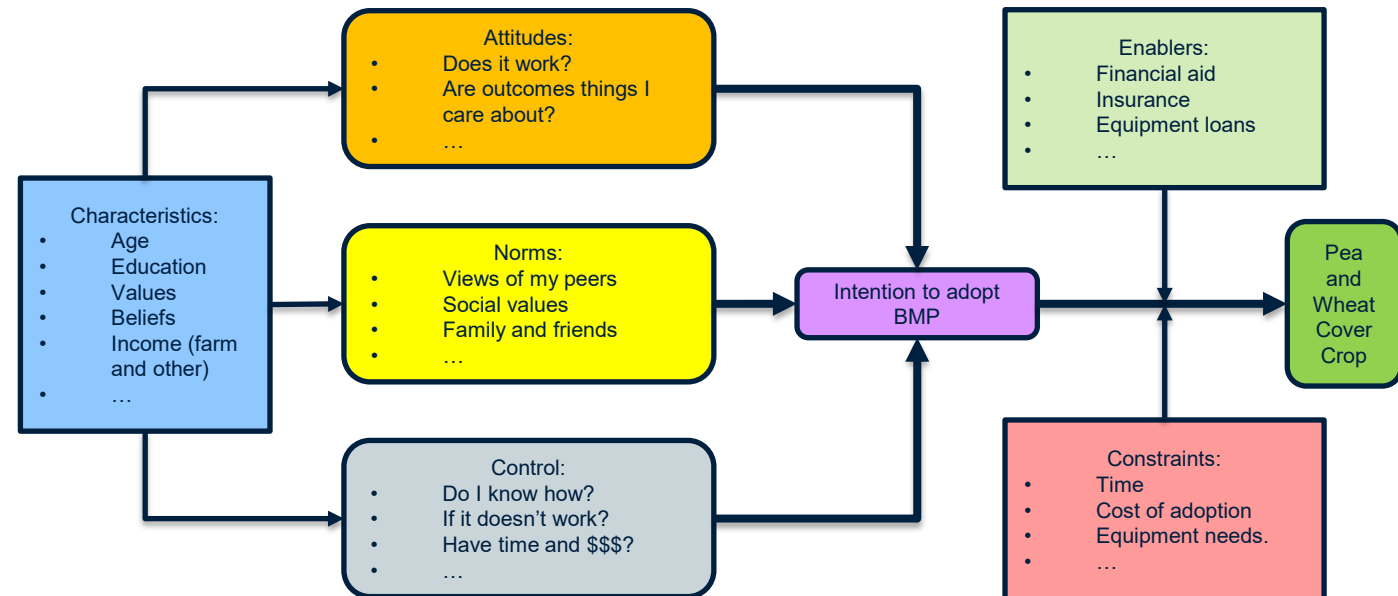
# PREDICTION

## The Scientific Method



### 3. Hypothesis

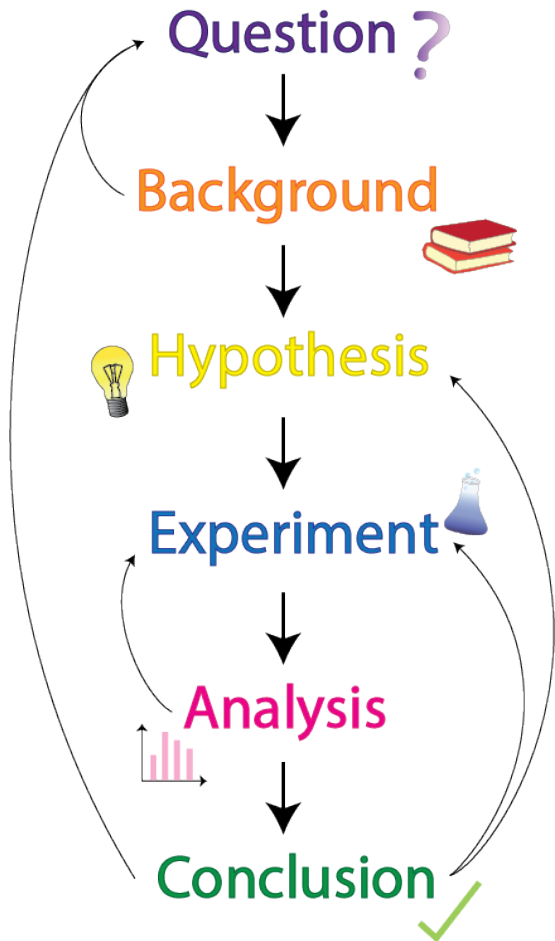
- Features represented by all boxes will matter.
- Role of features will differ by commodity.
- Role of features will differ by individual.





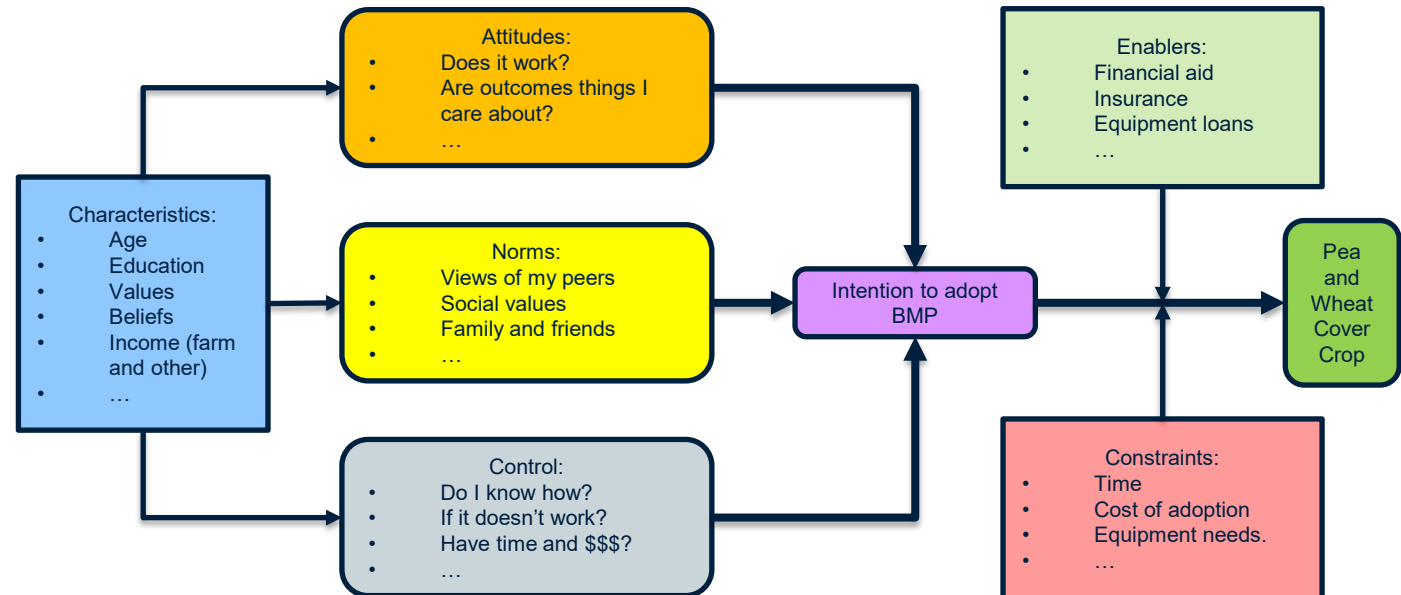
# PREDICTION

## The Scientific Method



### 4. Experiment

- Construct measures to capture aspects of each feature.
- Use common measures across commodities to detect different influences.
- Design measures so unique commodity factors captured.
- Survey across diversity of producers.



# RESPECT

- Some producers (and other data contributors) may consider some of this information private.
- Survey data must be securely stored.
- All involved in data collection and analysis must have committed to respecting confidentiality and privacy of people contributing data.
  - Primary data not shared unless those shared with have made same commitment.
  - Data **CANNOT** be archived and made public.
- Following university research ethics process facilitates satisfaction of requirements.







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