## SOCIO-ECONOMICS DESIGNING THE RESEARCH

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## SCIENTIFIC METHOD

# The Scientific1.Method2.

Background **lypothesis** Experiment Analysis Conclusion

#### Question

How can the uptake of BMPs be increased? Does living lab program increase 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.

#### Conclusion



#### EXAMPLE



DBC

#### EXAMPLE

![](_page_3_Figure_1.jpeg)

![](_page_3_Picture_2.jpeg)

#### 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.

![](_page_4_Picture_13.jpeg)

#### PREDICTION

![](_page_5_Figure_1.jpeg)

![](_page_6_Figure_0.jpeg)

![](_page_7_Figure_0.jpeg)

## PREDICTION

## The Scientific Method **Question**? Background **Hypothesis** Experiment Analysis Conclusion

#### 3. Hypothesis

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

![](_page_8_Figure_6.jpeg)

## PREDICTION

# **The Scientific** Method **Question**? Background **Hypothesis** Experiment **Analysis** Conclusion

#### 4. Experiment

- Construct measures to capture aspects of each feature.
- Common measures across commodities to detect differences.
- Ensure unique factors of commodities are not missed.
- Sample from participants, interested, and fringe.

![](_page_9_Figure_7.jpeg)

#### 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 **<u>CANNOT</u>** be archived and made public.
- Following university research ethics process facilitate satisfaction of requirements.

![](_page_10_Picture_7.jpeg)

![](_page_11_Picture_0.jpeg)

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![](_page_11_Picture_2.jpeg)