

# Documenting the Value of Research

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## Better Accountability

- Show link between research & stakeholders
- Provide supporting evidence for continued research
- Reflect well on ISU

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~~No new forms  
No high order stats  
No additional reports~~

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## Questions to Measure Value

- Why is your research of interest to the public?
- What about it would interest stakeholders?
- What can you anticipate will result from your effort?
- What are the short-, mid-, long-term outcomes?
- What changes may occur?
- How can Iowans benefit from your research?

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Example:

## Non-Basin Technologies for Open Feedlot Runoff: Demonstration, Implementation, & Modeling

Robert Burns

Agricultural & Biosystems Engineering

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## Research Project Goal

- Evaluate the performance of non-basin technologies for the treatment of open feedlot runoff at five beef operations

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## How?

- Assess computer models of non-basin technologies for use in planning & designing future runoff systems
- Quantify the volume of effluent runoff from various treatment areas
- Gain knowledge on the downward movement of water & effects of nitrogen on the quality of groundwater

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## Why is this research of interest to the public?

- If feasible:
  - these systems are cheaper for feedlots to build and manage, and
  - are more appealing for neighbors than a runoff holding pond.

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## What about this research would interest stakeholders?

- Are the systems effective in protecting water quality?
- Is there greater risk of problems?
- Are they costly to build or difficult to manage?

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## Measures of Outputs

- # Refereed journal articles
- # Abstracts
- # Proceedings
- # Research reports / presentations
- # Completed studies
- # Patents
- # Theses / dissertations or students graduated in ag sciences

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## Measures of Outputs

- # presentations at producer meetings
- # consultations with Iowa-based agencies and companies
- # software decision tools developed

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## What are the Outcomes of this research?

- Policy changes
- Producer adoption
- Recognition awards
- Revenue streams
- Consultations
- Research dollars

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## Measures of Outcomes

- Project Advisory Committee
  - Iowa Cattleman's Association
  - Iowa Department of Natural Resources
  - The University of Nebraska–Lincoln
  - Natural Resources Conservation Service
  - Iowa Environmental Council

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## Short-term Outcomes

- Because of this research, cooperating producers will:
  - Actively manage alternative systems
  - Keep daily records of weather & overflow
  - Record solid waste removal
  - Submit nutrient mgmt plans
  - Host educational field days

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## Mid-term Outcomes

- Other feedlot operators will observe system performance and evaluate their site as a possible location to adopt alternative technologies.

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## Long-term Outcomes

- Environmental regulators, neighbors, and Iowa Environmental Council will accept these treatment systems as effective methods to protect water quality.

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## Other Possible Impacts...

- Relationships / collaborations formed
- Interaction patterns established
- Strong connections between research efforts & public needs established
- New discovery or further research triggered by domino effect (one discovery leads to an expected direction)
- New practice / technology / process / product adopted (cultural change) resulting in greater efficiency

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## Benefits of collaboration

- Stimulate creative thinking
- Gain access to R&D expertise
- Accelerate entry to market
- Foster future collaborations
- Save time in development
- Identify stakeholder needs
- Save costs (labor, equipment)
- Ensure quality
- Rapid diffusion of knowledge, technology, processes
- Discover add'l areas of research
- Develop incubators
- Focus efforts
- Identify unanticipated avenues of inquiry

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## How do you answers these questions for your own research?

- Include questions when writing proposals
- Work w/ program evaluator to figure out indicators that can be reasonably measured

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## Program Evaluator

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