What should be measured to demonstrate the value of UC ANR programs?

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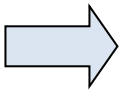
Katherine Webb-Martinez
& Kim Rodrigues

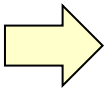
Using Science to Find Solutions

Performance Measures

Activities:
 # Research Projects, Workshops, Field days, Presentations, Interviews, etc.



Outputs/Products:
 # New fundamental or applied knowledge, Patents, Publications, Extension Newsletters, Websites, Videos, Manuals, etc.



Outcomes:
Clientele Changes in Knowledge, Attitude, Skill, Behavior, & Economic, Environmental, Social/Health Condition Changes

Why We Measure Outcomes

- To ensure accountability
- To secure funding
- To improve programs
- To influence policy
- To promote the program

"I think we owe this [accountability] to parents, students, legislators, taxpayers"

– UC President Mark Yudof at UC ANR Statewide Conference 2009

How ANR Uses Outcomes

Government

- Advocacy materials
- County reports
- Federal Annual Report & Plan of Work
- Ad hoc UC reports

General public

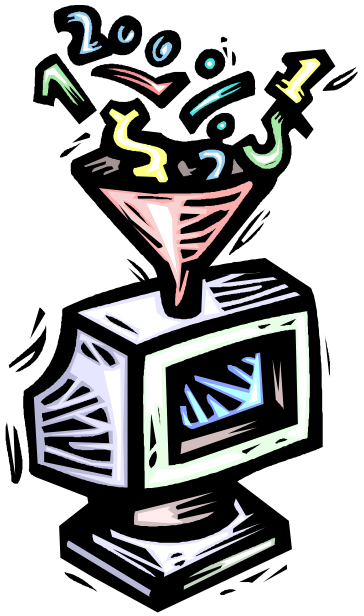
- Media stories

“Measure what you value and others will value what you measure”

– John Bare, The Arthur M. Blank Family foundation

How You Use Outcomes

- Merit and promotion process
- Reporting requirements
- UC Delivers & other advocacy
- Other?



What to measure?

1. What private value to individuals turns into public value?
2. What demonstrates public value?

- What effect did your publications have?
- Was your work adapted and extended by others?
- What did participants learn?
- What attitudes changed?
- What skills were increased?
- What practices/behavior changed?
- How many people changed?
- Were policies changed as a result?
- How much money was saved?
- What were the final outcomes?

Outcome Criteria

- Important
  - Does the outcome present meaningful change?
  - Is this improvement valued by key stakeholders, including you, program participants, and the public?
- Reasonable
  - Is the outcome connected to the program activities?
  - Is the outcome achievable given the resources, the situation?
- Realistic
  - Can we realistically measure it?

Challenges Measuring Outcomes

For Individual Academics:

- Accountability trends
- Lack of resources for evaluation (time, training, etc.)
- Deciding what and how to measure
- Multiple, different reporting requirements and formats

For ANR:

- Accountability trends
- Data issues
- Diverse training needs
- Communicating our statewide value

Individual Advisor EIPD Outcomes (DANRIS-X)

- 112 horticultural crop producers implement at least three low impact pest management practices
- 500 artichoke growers in Castroville, CA area incorporated fencing to exclude voles from artichoke fields based on our suggestion and initial study findings. This should greatly reduce rodenticide applications.
- 4 growers and consultants are now using management plans in a few areas for control of white rot in fields known to be infested with success. Previously, the management strategy was to avoid planting onions or garlic on infested soil, but with the spread of this disease to a large percentage of some growers property, options for garlic or onions is limited.

EIPD Federal Planned Program

Aggregated Statewide Outcome 10 → 1

5738 Farm owner/operators and managers, and Pest Control Advisors and other allied industry professionals, participating in pest management education programs, adopted recommended integrated pest management practices.

Outcomes Evaluation *Opportunity*:

Be more efficient and effective

Proposal

Define and agree upon UC ANR programmatic outcomes and indicators for our main program areas.

Rationale for Developing Statewide Outcomes

- Promote statewide, big picture Strategic Initiative thinking
- Focus Program Team effort
- Streamline academic reporting
- Improve outcomes data collected
- Address changing federal reporting requirements

Theme: Invasive Species Prevention & Control

Yellow Star Thistle Program & Multistate Invasive Species Research Project

Issue	Activity	Outputs/ Products	Intermediate Outcomes	Condition Outcomes
• Invasive species causing loss of rangeland and ecosystem damage	• Develop workshops for ranchers and managers on yellow star thistle control • Research on prevention and control for 3 invasive species	• New techniques for control of yellow star thistle • Research pubs and newsletter on prevention and control methods for 3 invasive species	• Ranchers and managers gain knowledge of control yellow star • Ranchers and mangers adopt recommended control practices	• Ranchers gain improved return for intermountain alfalfa • Improved health of ecosystem and native species

EIPD Condition Change Outcomes

WHO	WHAT
Farm and nursery owner/operators, participating in pest and disease management education programs,	**used recommended pest and disease management practices, which resulted in reduced crop losses and thus more economic gain.**

EIPD Learning Outcomes – Knowledge Change

WHAT
gained knowledge of Integrated Pest Management strategies and techniques.
gained knowledge of pesticide and pharmaceutical efficacy and optimal use.
gained knowledge of prevention, detection and treatment practices for invasive species.
gained knowledge on how to recognize and identify pests and diseases.

EIPD Learning Outcomes – Attitude & Skill Change

WHAT
were more likely to try out or adopt recommended strategies and techniques for invasive species and pest management.
gained boat inspection skills to identify invasive species to reduce risks of transporting invasive species on boat hulls.

EIPD Behavior Change Outcomes

WHAT
adopted recommended integrated pest management practices.
adopted treatment practices for invasive species.
adopted pesticide and pharmaceutical efficacy and optimal use practices.

NIFA National Outcome and Indicators

OUTCOME: ***More sustainable, diverse, and resilient food systems across scales.***

1. **Number of new diagnostic systems analyzing plant and animal pests and diseases.**

   [Diagnostic systems refer to, among other things: labs, networks, procedures, access points. We have used the term "available" because maintaining capacity is just as important as developing and deploying new capacity. So, this indicator and the next one refer to both existing and recently deployed diagnostics.]

2. **Number of new diagnostic technologies available for plant and animal pests and diseases.**

   The intent here is not to count individual pieces of equipment or devices, but to enumerate technologies that add to the diagnostic capacity.]

3. **Number of first detectors trained in early detection and rapid response of plant pests, animal pests and diseases.**

Proposed Process

- Work with Program Teams
- Determine interested members to be part of committee
- During Strategic Initiative Conferences and/or Program Teams meetings

Your input on next steps….

- Do you agree that statewide outcomes would be useful? For more than federal reporting?
- Are Program Teams the right mechanism? If not, then what?

Table group activity

- **What should we measure to demonstrate the value of EIPD outcomes statewide?**

EIPD Priority Areas:

1. Exclusion of pests & pathogens
2. Emerging & re-emerging pests and diseases
3. Integrated management

Session Wrap-up

- Interested? Talk to us.
- New resource: www.ucanr.org/sites/CEprogramevaluation

Thank you!