An Impact Should Make More Than a Dent in the Ground…

Making a Bigger Impact (Statement)!

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What's Happening?

ARRRGH!!! You want me to measure WHAT?

- Over the last several years we all have been challenged to measure the **outcomes** (impacts) of our activities.

Why Measure Outcomes?

- The Government Performance and Results Act of 1993 (GPRA).
- AREERA (Agricultural Research, Education and Extension Reform Act) of 1998 (POWs).
- Current President's management agenda.
- Performance assessment-based resource allocations.
- Development of assessment tools.
- The challenge has been to assess and effectively communicate the impacts of our efforts.

Accountability!

Who cares?

- The “Public.”
- Federal, state and local officials.
- University administration.
- Stakeholders.
- External funding sources.
- Industry representatives.
- ***Pretty much everybody…***

Why does their opinion matter?

- They seek quantifiable benefits of programs.
- We have competition for their attention.
- You can exercise some type of control over your programs future.
- ***And then, of course…***

Why should you care?

- Highlights the **successes** of your programs
- Builds a greater understanding of what you do and its **importance**
- Helps keep programs and activities **organized and focused**
- Encourages **community involvement** and support
- ***And then, of course.***

What is Impact?

- Quantitative, **measurable benefits** of the program outputs as experienced by those who receive them.
- The **quantifiable difference** a program makes in the quality of life for its clients and general citizenry.
- The **measurable change** in Economic, Social, or Environmental condition.
- The **identifiable change** in understanding within a discipline.

Examples

- Adoption of technology
- Creation of jobs
- Reduced cost to the consumer
- Less pesticide exposure to people
- Access to more nutritious food
- Cleaner environment and healthier communities

Specific Examples

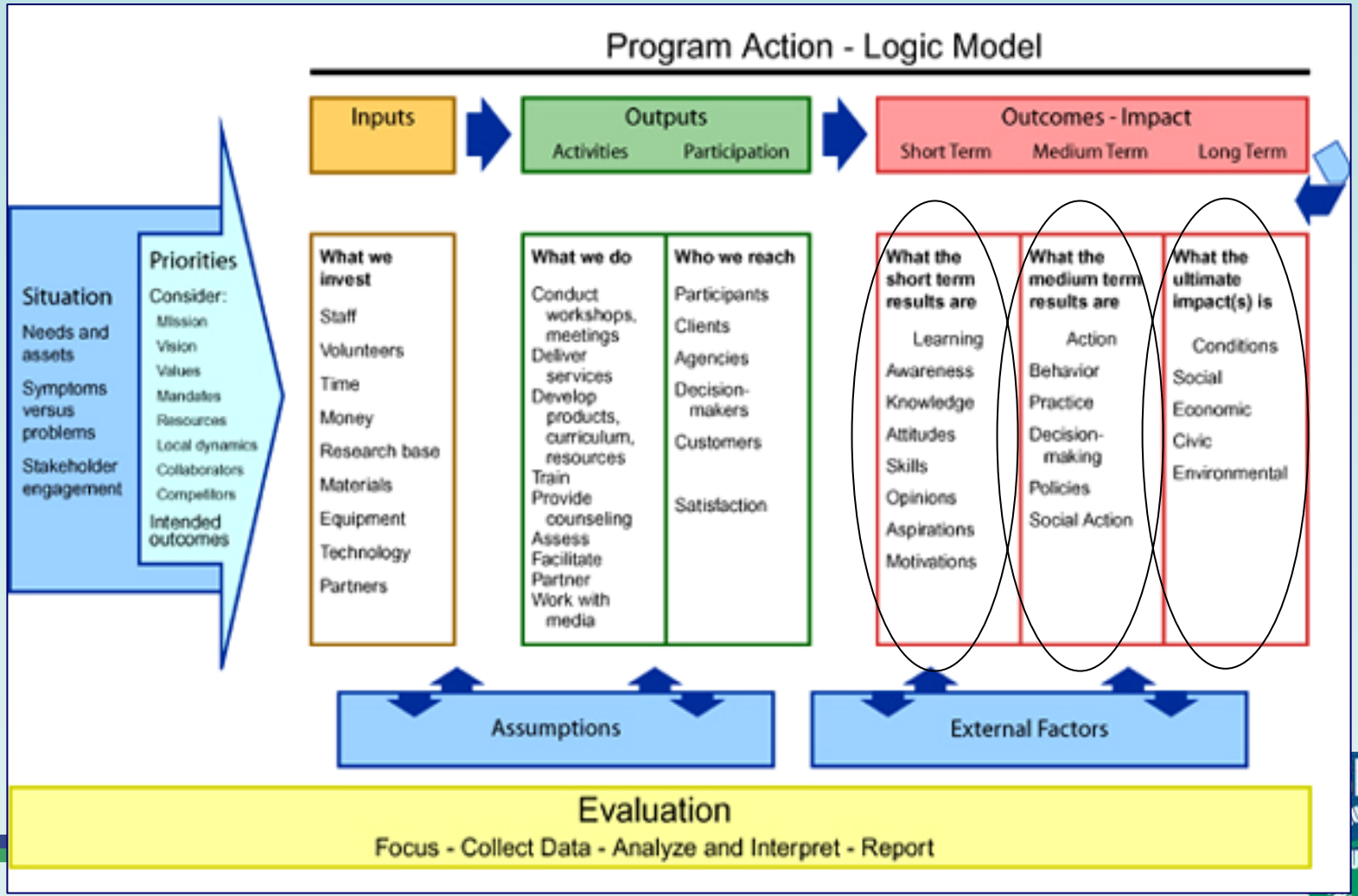
- Adoption of services
- Increased awareness – expanding client base
- Service to regulatory labs/functions
- Reduced losses to the client/producer
- Reduced pesticide exposure to people/wanton use
- Enhance client profitability
- Cleaner environment and healthier communities

These are outputs!!!

- Reports, publications, patents, data, workshops
- Description of the program
- General, long-range goal
- Number of persons attending a meeting
- Number of persons enrolled in a program

Logic Model

University of Wisconsin-Extension



Importance of impact statements to administrators

- Builds greater understanding of programs
- Makes it easy to sell research, extension, and education programs when impacts can be demonstrated
- Provides a product you can reuse
- Serves as a repository of anecdotes for speeches and letters

Importance of impact statements to faculty and staff

- Programs get more exposure
- Informs the public about the value of your efforts
- Opportunity to attract funding sources

What is an Impact Statement?

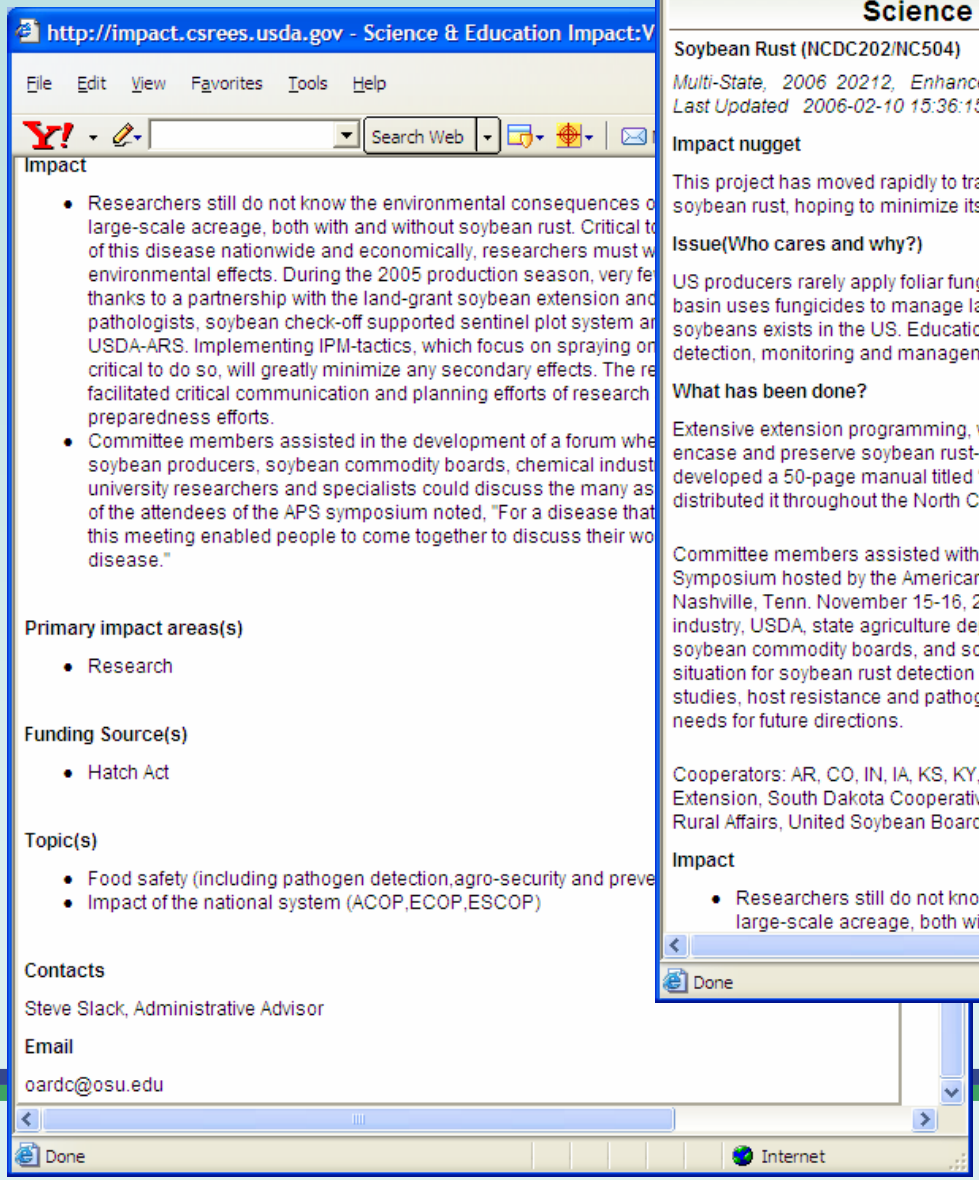
- It is a brief non-technical document that describes the difference that your research, teaching, or extension efforts have made
- Specifically, it states your accomplishments and the payoff to society
- It answers the questions:
  - ***"So what?"***
  - ***"Who cares?"***
  - ***"Why bother?"***

Ideal Statement Elements

- It demonstrates quantifiable change in at least one of the following:
  - Economic value or efficiency
  - Environmental quality
  - Social well-being
  - Health or quality of life
  - The Discipline

Components

- Issue
- Actions – What has been done
- Impact – the benefits
- Who was responsible
- Contact information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Impact
• Researchers still do not know the environmental consequences o
large-scale acreage, both with and without soybean rust. Critical t
of this disease nationwide and economically, researchers must w
environmental effects. During the 2005 production season, very fe
thanks to a partnership with the land-grant soybean extension and
pathologists, soybean check-off supported sentinel plot system ar
USDA-ARS. Implementing IPM-tactics, which focus on spraying on
critical to do so, will greatly minimize any secondary effects. The re
facilitated critical communication and planning efforts of research
preparedness efforts.
• Committee members assisted in the development of a forum whe
soybean producers, soybean commodity boards, chemical indust
university researchers and specialists could discuss the many as
of the attendees of the APS symposium noted, "For a disease that
this meeting enabled people to come together to discuss their wo
disease."
Primary impact areas(s)
• Research
Funding Source(s)
• Hatch Act
Topic(s)
• Food safety (including pathogen detection,agro-security and preve
• Impact of the national system (ACOP,ECOP,ESCOP)
Contacts
Steve Slack, Administrative Advisor
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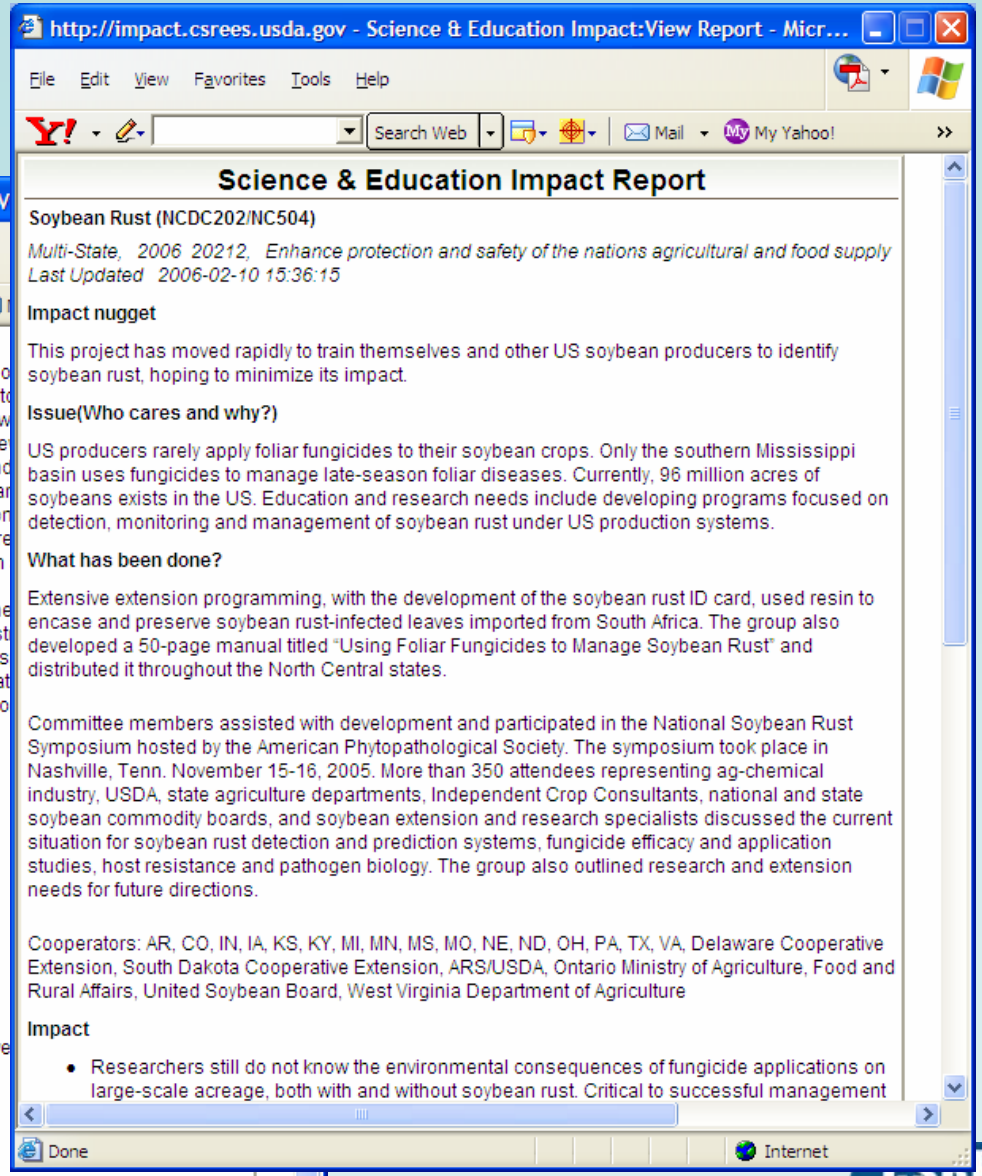
oardc@osu.edu
Done
Internet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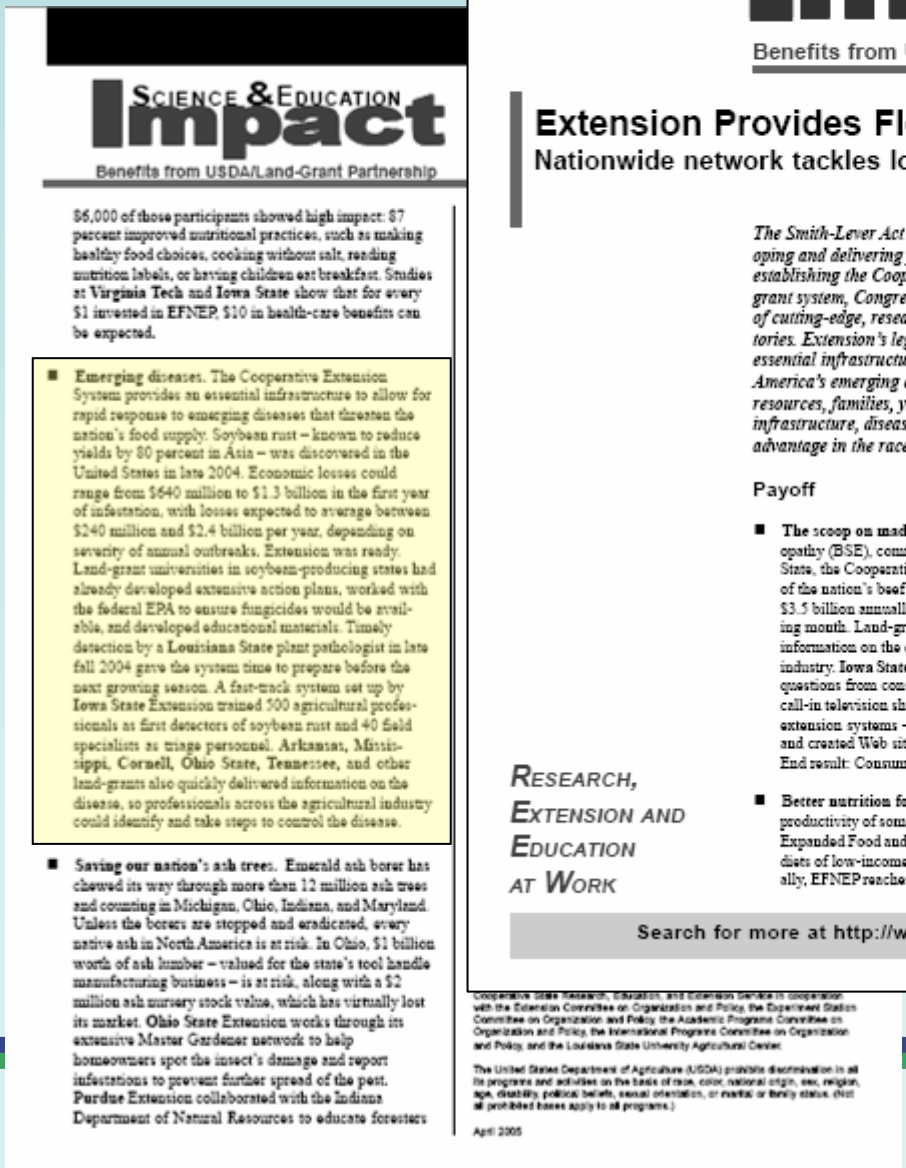
Science & Education Impact Report
Soybean Rust (NCDC202/NC504)
Multi-State, 2006 20212, Enhance protection and safety of the nations agricultural and food supply
Last Updated 2006-02-10 15:36:15
Impact nugget
This project has moved rapidly to train themselves and other US soybean producers to identify soybean rust, hoping to minimize its impact.
Issue(Who cares and why?)
US producers rarely apply foliar fungicides to their soybean crops. Only the southern Mississippi basin uses fungicides to manage late-season foliar diseases. Currently, 96 million acres of soybeans exists in the US. Education and research needs include developing programs focused on detection, monitoring and management of soybean rust under US production systems.
What has been done?
Extensive extension programming, with the development of the soybean rust ID card, used resin to encase and preserve soybean rust-infected leaves imported from South Africa. The group also developed a 50-page manual titled "Using Foliar Fungicides to Manage Soybean Rust" and distributed it throughout the North Central states.
Committee members assisted with development and participated in the National Soybean Rust Symposium hosted by the American Phytopathological Society. The symposium took place in Nashville, Tenn. November 15-16, 2005. More than 350 attendees representing ag-chemical industry, USDA, state agriculture departments, Independent Crop Consultants, national and state soybean commodity boards, and soybean extension and research specialists discussed the current situation for soybean rust detection and prediction systems, fungicide efficacy and application studies, host resistance and pathogen biology. The group also outlined research and extension needs for future directions.
Cooperators: AR, CO, IN, IA, KS, KY, MI, MN, MS, MO, NE, ND, OH, PA, TX, VA, Delaware Cooperative Extension, South Dakota Cooperative Extension, ARS/USDA, Ontario Ministry of Agriculture, Food and Rural Affairs, United Soybean Board, West Virginia Department of Agriculture
Impact
• Researchers still do not know the environmental consequences of fungicide applications on large-scale acreage, both with and without soybean rust. Critical to successful management
Done
Internet

Annual Summary – 2005

10-15 produced each year



SCIENCE & EDUCATION Impact

Benefits from USDA/Land-Grant Partnership

$6,000 of those participants showed high impact: 87 percent improved nutritional practices, such as making healthy food choices, cooking without salt, reading nutrition labels, or having children eat breakfast. Studies at **Virginia Tech** and **Iowa State** show that for every $1 invested in EFNEP, $10 in health-care benefits can be expected.

- **Emerging diseases.** The Cooperative Extension System provides an essential infrastructure to allow for rapid response to emerging diseases that threaten the nation's food supply. Soybean rust – known to reduce yields by 80 percent in Asia – was discovered in the United States in late 2004. Economic losses could range from $640 million to $1.3 billion in the first year of infestation, with losses expected to average between $240 million and $2.4 billion per year, depending on severity of annual outbreaks. Extension was ready. Land-grant universities in soybean-producing states had already developed extensive action plans, worked with the federal EPA to ensure fungicides would be available, and developed educational materials. Timely detection by a **Louisiana State** plant pathologist in late fall 2004 gave the system time to prepare before the next growing season. A fast-track system set up by **Iowa State** Extension trained 500 agricultural professionals as first detectors of soybean rust and 40 field specialists as triage personnel. **Arkansas, Mississippi, Cornell, Ohio State, Tennessee,** and other land-grants also quickly delivered information on the disease, so professionals across the agricultural industry could identify and take steps to control the disease.

- **Saving our nation's ash trees.** Emerald ash borer has chewed its way through more than 12 million ash trees and counting in Michigan, Ohio, Indiana, and Maryland. Unless the borers are stopped and eradicated, every native ash in North America is at risk. In Ohio, $1 billion worth of ash lumber – valued for the state's tool handle manufacturing business – is at risk, along with a $2 million ash nursery stock value, which has virtually lost its market. **Ohio State** Extension works through its extensive Master Gardener network to help homeowners spot the insect's damage and report infestations to prevent further spread of the pest. **Purdue** Extension collaborated with the Indiana Department of Natural Resources to educate foresters

Cooperative State Research, Education, and Extension Service in cooperation with the Extension Committee on Organization and Policy, the Experiment Station Committee on Organization and Policy, the Academic Programs Committee on Organization and Policy, the International Programs Committee on Organization and Policy, and the Louisiana State University Agricultural Center.

April 2005

SCIENCE & EDUCATION Impact

Benefits from USDA/Land-Grant Partnership

Extension Provides Flexible, Rapid Response

Nationwide network tackles local and emerging needs.

The Smith-Lever Act of 1914 set into motion an unbeatable vehicle for developing and delivering pertinent, timely information to people who need it. By establishing the Cooperative Extension System as an outreach of the land-grant system, Congress has provided citizens across the country with a wealth of cutting-edge, research-based information from university and field laboratories. Extension's legacy continues. Smith-Lever base funding provides an essential infrastructure that allows the extension network to address America's emerging and local needs – in its core areas of agriculture, natural resources, families, youth and community development. Without this basic infrastructure, diseases, droughts and other disasters would gain a greater advantage in the race to stop or prevent them.

RESEARCH, EXTENSION AND EDUCATION AT WORK

Payoff

- **The scoop on mad cow.** When the first U.S. case of bovine spongiform encephalopathy (BSE), commonly called mad cow disease, was discovered in Washington State, the Cooperative Extension System was ready with answers about the safety of the nation's beef supply. The announcement cut U.S. beef exports – valued at $3.5 billion annually – by 90 percent and retail prices dropped 9 percent the following month. Land-grants across the country quickly responded with research-based information on the disease and its risk to calm consumer fears about the $70 billion industry. **Iowa State** provided a national satellite program that included call-in questions from consumers and farmers. **South Dakota State** produced a national call-in television show so viewers could talk directly with doctors. **Maine** and other extension systems – from **Nebraska** to **Washington State** – worked with media and created Web sites with links to research-based information about the disease. End result: Consumers did not panic and U.S. beef prices rebounded.

- **Better nutrition for low-income families.** Poor nutrition affects the health and productivity of some low-income families. With ongoing efforts in every state, the Expanded Food and Nutrition Education Program plays a vital role in improving the diets of low-income families to improve health and reduce health-care costs. Nationally, EFNEP reaches nearly half a million participants. A nationwide survey of

Search for more at http://www.csrees.usda.gov/impacts

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NPDN: *Helping protect the American food supply*

The Issue…

- **The CHARGE – Describe in lay terms what the research/extension effort is all about.**
- **What are the consequences if this work isn't done?**

NPDN: *Helping protect the American food supply*

- **ACTIONS:**

  What are you doing to address the issues?

NPDN: *Helping protect the American food supply*

- **PROGRESS**

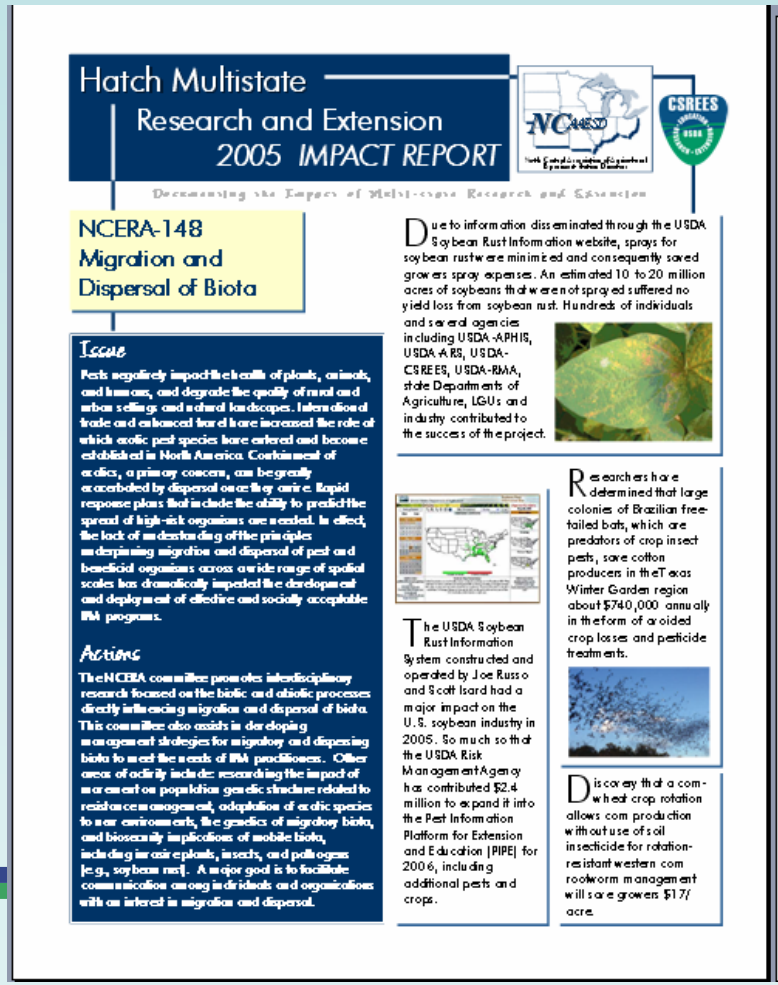
What has been achieved since the project started?

NPDN: *Helping protect the American food supply*

- **IMPACTS**

  What are impacts stemming from the work?

How will *CSREES* Use Your Information?



Hatch Multistate
Research and Extension
2005 IMPACT REPORT

Documenting the Impact of Multi-state Research and Education

NCERA-148
Migration and
Dispersal of Biota

Issue

Pests negatively impact the health of plants, animals, and humans, and degrade the quality of rural and urban settings and natural landscapes. International trade and enhanced travel have increased the rate at which exotic pest species have entered and become established in North America. Containment of exotics, a primary concern, can be greatly exacerbated by dispersal once they arrive. Rapid response plans that include the ability to predict the spread of high-risk organisms are needed. In effect, the lack of understanding of the principles underpinning migration and dispersal of pest and beneficial organisms across a wide range of spatial scales has dramatically impacted the development and deployment of effective and socially acceptable IPM programs.

Actions

The NCERA committee promotes interdisciplinary research focused on the biotic and abiotic processes directly influencing migration and dispersal of biota. This committee also assists in developing management strategies for migratory and dispersing biota to meet the needs of IPM practitioners. Other areas of activity include: researching the impact of movement on population genetic structure related to resistance management, adaptation of exotic species to new environments, the genetics of migratory biota, and biosecurity implications of mobile biota, including invasive plants, insects, and pathogens (e.g., soybean rust). A major goal is to facilitate communication among individuals and organizations with an interest in migration and dispersal.

Due to information disseminated through the USDA Soybean Rust Information website, sprays for soybean rust were minimized and consequently saved growers spray expenses. An estimated 10 to 20 million acres of soybeans that were not sprayed suffered no yield loss from soybean rust. Hundreds of individuals and several agencies including USDA-APHIS, USDA-ARS, USDA-CSREES, USDA-RMA, state Departments of Agriculture, LGUs and industry contributed to the success of the project.

The USDA Soybean Rust Information System constructed and operated by Joe Russo and Scott Isard had a major impact on the U.S. soybean industry in 2005. So much so that the USDA Risk Management Agency has contributed $2.4 million to expand it into the Pest Information Platform for Extension and Education (PIPE) for 2006, including additional pests and crops.

Researchers have determined that large colonies of Brazilian free-tailed bats, which are predators of crop insect pests, save cotton producers in the Texas Winter Garden region about $740,000 annually in the form of avoided crop losses and pesticide treatments.

Discovery that a corn-wheat crop rotation allows corn production without use of soil insecticide for rotation-resistant western corn rootworm management will save growers $17/acre.

Multi-state Project NCERA-148

Migration and Dispersal of Biota

Who is Responsible?

Researchers and Extension faculty at the following State Land Grant Universities and ARS laboratories are involved in this project: AZ, IL, IA, ME, MI, MN, MS, NE, NYC, OH, PA, TN, VA, WI, USDA/ARS, IA, USDA/ARS, TX.

Contact Information

Contact Names and Email addresses for state/federal scientists participating in this project may be viewed at: http://lgu.umd.edu/lgu_v2/pages/appendixE.cfm?trackID=3850

The Administrative Advisor for the project is:
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Knowing that intrafield movement rates for western corn rootworm adults are somewhat limited played a role in the requirement that non-transgenic (Bt) refuges for western corn rootworm be placed in or immediately adjacent to rootworm Bt corn. Information that properly places refuge corn in relation to transgenic corn helps preserve pest susceptibility to Bt.

A recent genetics study using DNA markers has demonstrated that western corn rootworm is being repeatedly introduced to Europe from North America. These results highlight the role of transoceanic transport of harmful pest species and suggest that more attention should be paid to controlling pest species on intercontinental flights.

Demonstration of genetic similarity of western corn rootworm populations in US led to modification of designs and objectives of ongoing population and gene flow studies in Illinois, France, and at EPA.

Development of beetle-infecting nematode traps for improved control of Japanese beetles will help reduce the economic impact of this invasive pest in nursery and fruit crops, home lawns, and public landscapes.

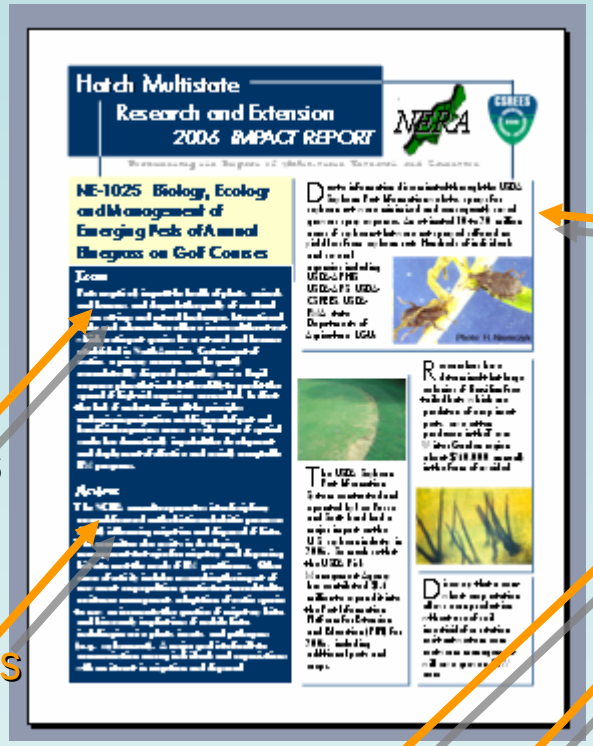
Understanding the dispersal capabilities of emerald ash borer beetles will provide information critical to the deployment of appropriate management strategies aimed at minimizing further spread of this pest into the United States and Canada.

Dissemination of principles of aerobiology as they have been applied to soybean rust, through the recent paper in BioScience, will increase international awareness of research into pest movement and the collaborative work of members of NCERA-148.

Research on migration and dispersal of aster leafhopper, vector of aster yellows disease of vegetable crops, has led to a pest monitoring and management program that has greatly reduced unnecessary applications of insecticides in Ohio vegetable crops and prevented disease loss

Multi-state research activities are funded by Hatch Act base funding to Land Grant University Agricultural Experiment Stations by the USDA Cooperative State Research, Education and Extension Service. The NCERA-148 committee is administered through the North Central Association of Agricultural Experiment Station Directors.

How will *CSREES* Use Your Information?



Your Impact Statements

Your Issues

Your Actions

Who is responsible

Contact Information

What IF… *CSREES and the Land Grant Universities*

Can't Show That This Collaborative Project Has a Significant IMPACT on High Priority Issues?

$$ng

That's All Folks!

Credits:
Mike Harrington,
Exec Dir. WAAESD

Rick Meyer,
USDA-CSREES NPL,
Entomology