2007 Purdue University Combined Research and Extension Plan of Work

Brief Summary about Plan of Work

The planned programs for Indiana are

- natural resources and environment
- plants and their systems
- animals and their systems
- agricultural, natural resources, and biological engineering
- food/non-food products: development, processing, quality, and delivery
- economics, markets and policy
- human nutrition, food safety, human health and well being
- family well being
- youth development
- economic, community development

These planned programs were determined after reviewing input from stakeholder interviews and community sessions conducted throughout Indiana in 2003 and 2005. In 2005, nearly 4600 people participated in the interviews and community sessions. Under-served and under-represented populations were included in the interviews and community sessions. Approximately 10% of the 1700 interview participants were from underserved or under-represented populations. Interviews with stakeholders representing state level organizations and agencies were also conducted to assess the needs of the state. Stakeholders recognized Purdue as a trusted source of information for families, farms, businesses, and communities. They said that Purdue research and extension should continue to focus efforts to strengthen families, farms, businesses, and communities.

In addition, many of the planned programs respond to issues identified in the State of Indiana's and Purdue University's strategic plans. According to the Indiana Department of Agriculture, Indiana is in a unique position to be a global leader in several food and agriculture areas. This conclusion is based on the state's productive land base, central location to the U.S. population, innovative research, and manufacturing expertise. Agriculture continues to have a significant role in Indiana's economy and represents an area for economic growth and development. In Indiana the food and agricultural sector generates directly or indirectly about twenty percent of the jobs and income in the state. With Indiana's diverse agricultural structure, Purdue research and extension can play a role in helping people become more productive and prosperous. Environmental safety and increases in bio-fuel production are also high priority policy issues in Indiana. Several areas targeted for growth by the State Department of Agriculture are included among the planned programs identified in this plan of work. The natural resources and environment, plants and their systems, animals and their systems, agricultural, natural resources, and biological engineering, and economics, markets, and policy planned programs describe research and extension efforts that address these issues.

Indiana's 2006 strategic plan for economic development stresses the need for a skilled constantly improving workforce, a culture of entrepreneurship, a pro-investment business climate, and strategic leadership development. Purdue's engagement strategic plan focuses on advancing Indiana's economic prosperity, enhancing educational and learning opportunities, and improving the quality of life of Hoosiers. Planned programs for Purdue research and extension include strategies for each of these factors. Five areas within the economic community development planned program focus on entrepreneurship, workforce development, public issues, education, community planning and visioning, and leadership and civic engagement. In addition, several other planned programs include efforts that relate to economic prosperity and improving the quality of life.

Stakeholders noted that families face many challenges including financial concerns, health issues, and the need to build positive relationships inside and outside the family. These types of challenges can impede healthy family functioning and decision making. Research and extension programs addressing topics such as effective parenting, caring for older adults, building self-esteem, managing stress, basic money management, and planning for the future will assist families in dealing with these challenges. Stakeholders encouraged Purdue to continue to work with family members across generations and in collaboration with others in the community, including schools and local and state agencies, to strengthen Hoosier families.

Developing Hoosier youth was a key theme stressed by stakeholders. The 4-H Youth Development program provides opportunities, relationships, and support for youth to help them acquire the life skills necessary to meet the challenges of adolescence and adulthood. Youth development programs are aligned with specific mission areas including science, engineering and technology, healthy lifestyles, and citizenship education. With 20,000 volunteers involved in the Indiana 4-H youth development program, volunteer development opportunities are another essential part of this planned program. These volunteers are a vital component to positive youth development because of the on-going relationships that are established.

Improving the health of Hoosiers is another of the state's priorities. Indiana is near the top of the rankings of negative health issues, including obesity, smoking rate and the afflictions that accompany these: diabetes, high blood pressure, cancer, heart disease, and stroke. Purdue research and extension programs focus on the impact of dietary intake and exercise on human health, use and beneficial effects of phytochemicals, cereal processing and nutrition, calcium and bone metabolism, and impact of dietary intake and bone health. Educational programs are provided for the food and health care industries and consumers.

Consumers expect a wholesome and safe food supply yet outbreaks of foodborne illness indicate a need for ongoing research and education in this area. Purdue food safety programs focus efforts toward rapid detection of foodborne pathogens, food processing treatments to reduce pathogens, control of molds and mycotoxins, pest control, and the impact of human intestinal microflora and human disease. Effective educational programs translate the best practices for farmers, retailers, and consumers to help them adopt food-handling procedures that more effectively minimize food-safety risks.

One of the goals of the planned programs is to integrate research, outreach, and educational efforts to effectively address the issues identified. For some issues further integration of research and extension efforts and building more interdisciplinary teams is needed while for other issues those teams are already established. Another key strategy will be to continue to partner with industry, regulatory groups, and other stakeholders to increase the potential impact of the research and extension efforts.

Since one of the objectives of this plan is to provide relevant research and extension programs, continual review of progress toward ultimate goals and outcomes will be an essential part of the process. Teams working on planned programs will provide continual review of progress toward goals and outcomes, including assessing whether additional topics should be added to a specific planned program because of changing needs. County Extension Boards will continue to review planned programs on an annual basis to ensure that programs are continuing to address critical needs. PCARET, the Purdue Council on Agricultural Research, Extension and Teaching, meets semi-annually with county, district, and state administrators to discuss needs and how extension and research are or can address them. An annual conference also provides an opportunity for the state PCARET to review progress on planned programs and provide input on expectations of future needs and programs. In addition, specific research projects are peer reviewed before they are undertaken.

The ultimate goals of these planned programs are very similar to the goals of Purdue's engagement strategic plan: advancing Indiana's economic prosperity, enhancing educational and learning opportunities, and improving the quality of life of Hoosiers. In its own way, each planned program contributes to Indiana's economic prosperity, enhances educational opportunities, or improves the quality of life of Hoosiers.

Estimated number of professional FTEs/SYs to be budgeted for this plan.

Year	Extenion		Research	
	1862	1890	1862	1890
2007	130.9	0.0	238.5	0.0
2008	130.9	0.0	238.5	0.0
2009	130.9	0.0	238.5	0.0
2010	130.9	0.0	238.5	0.0
2011	130.9	0.0	238.5	0.0

Merit Review Process

The merit review process that will be employed during the 5-Year Plan of Work cycle

- Internal University Panel
- External Non-University Panel
- Combined External and Internal University External Non-University Panel

Brief explanation

An internal panel will be appointed by the Director of Extension and Director of Research to review planned programs for relevancy in addressing critical needs. Teams working on various planned programs will provide continual review of progress toward goals and outcomes, including assessing whether additional topics should be added to a specific planned program because of changing needs. County Extension Boards will continue to review planned programs on an annual basis to ensure that programs are continuing to address critical needs. PCARET, the Purdue Council on Agricultural Research, Extension and Teaching, meets semi-annually with county, district, and state administrators to discuss needs and how extension and research are or can address them. An annual conference also provides an opportunity for the state PCARET to review progress on planned programs and provide input on expectations of future needs and programs.

In addition, Hatch research projects are subject to peer review prior to submission to USDA-CSREES. Review panels consist of at least three scientists that include faculty from at least two disciplines. Faculty members are strongly encouraged to collaborate across departments, schools, and universities. Multi-state projects are reviewed by regional department head associations and the Multi-State Review Committee composed of agricultural experiment station directors. Reviewers look for relevance, feasibility, building on previous research, approach and methods, scientific, and technical merit.

Academic departments are reviewed every 5 years by an external CSREES team. The research, extension, and teaching components of each department are examined during these reviews. These reviews provide an additional opportunity for merit review of research and extension programming.

Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

During 2003, Purdue Extension educators and Extension Board Members interviewed more than 2300 stakeholders to determine the programs and directions that Purdue Extension should pursue. In addition, interviews were conducted with key stakeholders representing statewide organizations and agencies. In 2005, additional interviews and community sessions were held throughout Indiana to validate the issues identified during the 2003 interviews. A key focus in the 2005 interviews and community sessions was reaching out to under-represented and underserved populations for their input. Stakeholders identified issues that they felt were critical needs in the state. Their input was essential in determining the planned programs and priorities. Strong families, businesses, and communities were of critical interest to the stakeholders so planned programs have been included to address those critical areas through research and educational programs.

Ongoing input from stakeholders is valued by Purdue Extension and Research programs. Annual review of programs and prioritizing of needs is encouraged and expected. Extension Boards and the Council on Agricultural Research, Extension, and Teaching (CARET) have opportunities to provide input on critical issues facing the state.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

Underserved and under-represented populations were included in the 2003 and 2005 stakeholder input interviews and community sessions. Their input was valuable in determining the planned programs. As a result, the needs of these populations will be addressed through the research and educational programs related to youth, families, farms, businesses, and communities.

3. How will the planned programs describe the expected outcomes and impacts?

Planned programs were developed by following the logic model to identify the situation, priorities, inputs, outputs, outcomes, assumptions, and external factors. Each planned program has specific outputs, outcomes, and impacts that relate to the situations and priorities. Target measures will be documented.

4. How will the planned programs result in improved program effectiveness and/or efficiency?

Planned programs will enable Purdue University to focus time and energy on issues that are important to stakeholders. This process of determining planned programs helps us focus our efforts on the most critical needs identified by the state. As a result of preparing an integrated research and extension plan, we better understand where we are integrating research and extension efforts and where we need to strengthen our integration of efforts. Identifying planned programs in this way requires us to assess progress toward the identified needs and enhances our ability to explain that progress to stakeholders.

Stakeholder Input

1. Actions taken to seek stakeholder input that encourages their participation (Check all that apply)

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public

Brief explanation.

{NO DATA ENTERED}

2(A). A brief statement of the process that will be used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Open Listening Sessions
- Needs Assessments

Brief explanation.

{NO DATA ENTERED}

2(B). A brief statement of the process that will be used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public

Brief explanation

{NO DATA ENTERED}

3. A statement of how the input will be considered

- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Action Plans
- To Set Priorities

Brief explanation.

{NO DATA ENTERED}

1. Name of the Planned Program

Youth Development

2. Program knowledge areas

- 806 Youth Development 100 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

The Indiana 4-H Youth Development Program will provide young people with sustained opportunities to gain a sense of belonging, independence, mastery, and generosity. When these essential elements of a positive youth development experience are in place, youth can: master skills to make positive life choices; effectively contribute to decision-making and act responsibly; and positively influence their communities and the general society.

4-H Youth Development Programs provide just such opportunities, relationships, and support for young people to help them acquire the life skills necessary to meet the challenges of adolescence and adulthood. On-going relationships with adults are essential to positive youth development. These relationships are established with adult volunteers who serve as positive role models for the young people who are affiliated with 4-H programs and activities.

6. Situation and priorities

Youth development is the natural process of developing one's capacities. While it occurs through young people's daily experiences with people, places, and possibilities, it is far too important to be left to chance. Positive youth development occurs from an intentional process that promotes positive outcomes for young people by providing opportunities, choices, relationships, and the support necessary for youth to fully participate. Youth development takes place in families, peer groups, schools, neighborhoods, and communities.

4-H Youth Development Programs provide just such opportunities, relationships, and support for young people to help them acquire the life skills necessary to meet the challenges of adolescence and adulthood. 4-H Youth Development uses hands-on, research-based educational opportunities that help youth become competent, caring, confident, connected, and contributing citizens of character. These experiences immediately yield new knowledge and provide young people with advanced skills in subjects of interest and provide clear and consistent moral precepts that effectively guide behavior. Young people, as a result, develop a willingness to accept new challenges and expect success, establish and maintain relationships at many levels, and respond to the needs and concerns of others.

Indiana 4-H Youth Development Programs will be aligned with three national 4-H mission areas: Science, Engineering and Technology; Healthy Lifestyles; Citizenship Education.

7. Assumptions made for the Program

4-H Youth Development is a programmatic priority of the Purdue Cooperative Extension Service. When Indiana communities and environments include sustained opportunities for young people to gain a sense of belonging, independence, mastery, and generosity, youth can: master skills to make positive life choices; effectively contribute to decision-making and act responsibly; and positively influence their communities and beyond. On-going relationships with adults are essential to positive youth development.

Indiana 4-H Youth Development includes programs and partnerships that are:
Offered during times that children and youth are not in school and their parents are in need of safe, healthy, caring, and enriching environments for their children and youth;
Designed to be developmentally appropriate for children and youth from kindergarten to twelfth grades;
Designed to engage children and youth in experiential learning in partnership with adults;
Designed on principles of youth development to address the interests of children and youth and their physical, cognitive, social and emotional needs;
Designed to be experiential, engaging, and fun!

8. Ultimate goal(s) of this Program

The 4-H Youth Development Program will be sustained and will respond to the needs and changes of youth and their families. Recruitment and retention of youth through quality programs and environments will expand positive youth development throughout the state of Indiana. As a result, youth will become caring and contributing members of society through positive experiences in a diverse 4-H Youth Development Program.

An increase in the quality, effectiveness and accountability of volunteers in the 4-H Youth Development Program will result in increased numbers of both 4-H members and volunteers.

9. Scope of Program

- In-State Extension
- Multistate Extension

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	10.0	0.0	0.0	0.0
2008	10.0	0.0	0.0	0.0
2009	10.0	0.0	0.0	0.0
2010	10.0	0.0	0.0	0.0
2011	10.0	0.0	0.0	0.0

Outputs for the Program

13. Activity (What will be done?)

Develop Curriculum
Conduct Evaluation/Research
Participate in Collaborations That Have a Youth Focus
Conduct Educational Workshops
Provide Youth and Volunteer Training and Development
Website Development

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	Indirect Methods
• Education Class • Workshop • Group Discussion • Demonstrations	• Newsletters • Web sites

15. Description of targeted audience

Youth --- Grades K-12
Volunteers
Public/Private School Teachers

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	15000	250000	250000	150000
2008	15000	250000	250000	150000
2009	15000	250000	250000	150000
2010	15000	250000	250000	150000
2011	15000	250000	250000	150000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	0
2011	0

18. Output measures

Output Text

New/revised curriculum topics will be developed

2007 Target: 5
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Output Text

Ongoing evaluation of 4-H Youth Development programs, events and activities

2007 Target: 25
2008 Target: 25
2009 Target: 25
2010 Target: 25
2011 Target: 25

Output Text

Youth and adult involvement in youth focused community collaborations

2007	Target:	0
2008	Target:	1500
2009	Target:	2500
2010	Target:	4000
2011	Target:	5000

Output Text

Number of quality, educational workshops for youth audiences

2007	Target:	150
2008	Target:	150
2009	Target:	150
2010	Target:	150
2011	Target:	150

Output Text

Number of volunteer development opportunities

2007	Target:	100
2008	Target:	100
2009	Target:	100
2010	Target:	100
2011	Target:	100

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Each of Indiana's 92 counties will establish goals for increasing the types of geographic settings in which programs are offered and increasing the opportunity for youth to be engaged in 4-H club work with a likely result in an increase in the number of youth in 4-H Youth Development Programs.

Outcome Type: Short

2007	Target:	0
2008	Target:	0
2009	Target:	0
2010	Target:	0
2011	Target:	0

Outcome Text

46 Indiana counties will experience growth and diversity in 4-H Youth Development Program opportunities and resources for youth.

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Each of Indiana's 92 counties will experience growth and diversity in 4-H Youth Development Program opportunities and resources for youth.

Outcome Type: Long

2007 Target: 0
2008 Target: 25
2009 Target: 46
2010 Target: 70
2011 Target: 92

Outcome Text

Each of Indiana's 92 counties will develop a plan for volunteer development focused on educating volunteers to increase their understanding of life skill development, experiential learning, risk management, and group management.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of volunteers and Extension staff who report improved knowledge and skills in supporting, delivering, and/or managing quality positive youth development experiences and program planning for youth.

Outcome Type: Short

2007 Target: 0
2008 Target: 1000
2009 Target: 2000
2010 Target: 3000
2011 Target: 4000

Outcome Text

100% of volunteers surveyed will report management of safe environments in which 4-H youth have the opportunity to learn.

Outcome Type: Medium

2007 Target: 0
2008 Target: 1000
2009 Target: 2000
2010 Target: 3000
2011 Target: 4000

Outcome Text

Number of youth who increased knowledge of good character traits, goal setting, team work, communication techniques, decision making, and handling conflict

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

50% of 4-H youth surveyed will indicate they possess the skills to practice good character, to plan and organize community service activities, and have the skills to be actively engaged in local, state, and national issues

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

100% of youth surveyed at the culmination of their 4-H career will report the life skills developed through the program, know how to set goals, work cooperatively in a team, communicate effectively, make decisions based on data and the opinions of others, honor individual differences and handle conflict.

Outcome Type: Medium

2007 Target: 0
2008 Target: 500
2009 Target: 1000
2010 Target: 1500
2011 Target: 2000

Outcome Text

Number of youth involved in community service activities

Outcome Type: Medium

2007 Target: 1000
2008 Target: 2000
2009 Target: 3000
2010 Target: 4000
2011 Target: 5000

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

Description

Each and every one of the above factors can (and at times may) influence a family's ability or desire to allow their children to participate in events/activities outside the home or family system. These factors also have the potential to negatively impact an individual or community perception of Extension or the 4-H Youth Development Program and/or staff we employ. Changes in appropriations (positive, negative, federal, state, or local) have a tremendous impact on the ability to deliver programming in local communities.

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Time series (multiple points before and after program)
- Case Study
- Other

Description

On-going evaluations and needs assessments will be conducted with youth to determine effectiveness of programs, events and activities as well as gaps.

22. Data Collection Methods

- Sampling
- Whole population
- Mail
- On-Site
- Structured
- Unstructured
- Case Study
- Observation
- Tests

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Economics, Markets, and Policy

2. Program knowledge areas

- 603 Market Economics 13 %
- 606 International Trade and Development 11 %
- 602 Business Management, Finance, and Taxation 8 %
- 601 Economics of Agricultural Production and Farm Management 15 %
- 609 Economic Theory and Methods 3 %
- 610 Domestic Policy Analysis 4 %
- 605 Natural Resource and Environmental Economics 11 %
- 611 Foreign Policy and Programs 1 %
- 604 Marketing and Distribution Practices 27 %
- 607 Consumer Economics 7 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

The global and U.S. agricultural economy is experiencing unprecedented technological and economic change. The World Trade Organization, along with several bilateral country negotiations, is attempting to further liberalize trade and increase market access. This is especially important within the Doha Development Agenda to reduce poverty in low-income countries. U.S. domestic agricultural policy, under severe budget constraints, is attempting to reduce direct farmer subsidies and direct federal resources towards programs that improve environmental quality and help sustain rural communities. Biotechnology, growing demand for bio-fuels, and increased concentration of livestock production are increasing the opportunities and challenges for farm and business leaders as they seek to maximize profits in an environmentally and consumer sensitive fashion.
Consumers increasingly are demanding low-cost, safe food with added convenience and value. This is creating tremendous marketing challenges within the food supply-chain. Purdue University economists, along with colleagues in other disciplines, and in other research institutions around the globe, are collecting the appropriate data and estimating complex global trade and policy models to ascertain the socioeconomic impacts of proposed international and domestic policy changes, potential threats to our food supply from dangerous pathogens or bioterrorism, implications of the adoption of new biotechnology-based crops, and the economic and environmental impacts of concentrated animal production systems. The Center for Trade Policy Analysis will conduct periodic conferences with trade and policy stakeholders. Faculty in the Center for Agricultural Business through degree and non-degree-based programs will provide the intellectual knowledge and training for agribusiness executives and managers. Finally, faculty and administrators in the College of Agriculture and other colleges and centers across the Purdue University campus are involved in various engagement and extension activities to create jobs and entrepreneurial skills among our citizens and to facilitate technology transfer and economic development throughout the State of Indiana. In addition, several farm management programs such as the annual Farm Management Tour, the Economic Outlook Campaign, and the Top Farmer Workshop will share business and marketing management concepts along with the transfer of new farming technologies. In cooperation with field extension staff, a series of programs are planned with various stakeholders on the economic impacts of proposed provisions in the next Farm Bill.

6. Situation and priorities

The global and domestic agricultural economy is facing unprecedented technological, policy, and social/cultural changes. This can have substantial socioeconomic and environmental impacts on Indiana since the food and agricultural sector generates directly or indirectly about 20% of the jobs and income in the state. Economists, along with colleagues in several other disciplines, will use appropriate primary and secondary data and statistical and simulation models to assess these impacts. Results will be shared in a

variety of ways with policy makers, farmers, agribusiness leaders, and other stakeholders. Such analysis is critical for public sector policymaking as well as for private sector investment, production, and marketing decisions

7. Assumptions made for the Program

While Federal formula funding for research and extension will remain important to accomplish these efforts, increasingly the faculty will require Federal competitive grant support from agencies such as USDA-NRI, NSF, NIH, DOE, and other agencies. Commodity groups and private foundation support can be helpful to carry-out this mission-oriented research on agribusiness and economic issues

8. Ultimate goal(s) of this Program

The ultimate goal is to increase the profitability and efficiency of the food, agricultural, and natural resource system in a sustainable fashion.

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	22.0	0.0	18.0	0.0
2008	22.0	0.0	18.0	0.0
2009	22.0	0.0	18.0	0.0
2010	22.0	0.0	18.0	0.0
2011	22.0	0.0	18.0	0.0

Outputs for the Program

13. Activity (What will be done?)

The Center for Trade Policy Analysis will conduct workshops with stakeholders on the expected economic impacts of trade and domestic agricultural policy.

The New Ventures Team and staff in the Agricultural Innovation and Commercialization Center will offer training programs throughout the state on entrepreneurship and starting new value-added businesses.

Agricultural policy workshops will be conducted with farm groups such as the Indiana Farm Bureau and the Farm Policy Study Group.

Websites such as the Agricultural Economic Reports will provide timely analysis on marketing, management, and policy issues.

Econometric and simulation models will be specified and validated to determine the socioeconomic impacts of proposed international trade and domestic agricultural policy proposals.

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • One-on-One Intervention • Other 1 (Distance Education Programs) • Other 2 (Economic Outlook Campaign)	• Public Service Announcement • Newsletters • Web sites • Other 1 (Extension Publications)

15. Description of targeted audience

Indiana farmers
State and Federal government policy makers, especially the Indiana State Department of Agriculture and the Office of the Secretary of Agriculture
Indiana general farm and commodity organizations such as Indiana Farm Bureau, Indiana Pork Producers, Indiana Soybean Alliance
Agricultural input supply industry managers such as Monsanto, DuPont-Pioneer, John Deere, Beck Hybrids, Dow-AgroSciences
Agricultural marketing firms such as Tate & Lyle, ADM, Countrymark, Cargill
International trade organizations and officials including the Office of the U.S. Special Trade Representative and WTO in Geneva

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	10000	25000	250	2000
2008	10000	25000	250	2000
2009	10000	25000	250	2000
2010	10000	25000	250	2000
2011	10000	25000	250	2000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	0
2011	0

18. Output measures

Output Text

Number of programs with state and federal government officials on trade and farm policy development and impact assessment

2007	Target:	10
2008	Target:	10
2009	Target:	10
2010	Target:	10
2011	Target:	10

Output Text

Number of programs offered to agri-business leaders by the Center for Food and Agricultural Business

2007	Target:	15
2008	Target:	15
2009	Target:	15
2010	Target:	15
2011	Target:	15

Output Text

Number and quality of peer reviewed research publications in professional journals on economics, markets, and policy

2007	Target:	25
2008	Target:	25
2009	Target:	25
2010	Target:	25
2011	Target:	25

Output Text

Number of programs with Indiana farmers on farm management and commodity marketing such as the annual Top Crop Farmer Workshop, Farm Management Tour, and the Outlook Campaign

2007	Target:	50
2008	Target:	50
2009	Target:	50
2010	Target:	50
2011	Target:	50

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of participants who increase their knowledge of commodity markets and marketing contracts

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of Indiana farmers who increase the use of commodity markets and marketing contracts to reduce price risk and increase profitability

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percentage increase in the productivity and profitability of Indiana farms

Outcome Type: Long

2007 Target: 0
2008 Target: 2
2009 Target: 2
2010 Target: 2
2011 Target: 2

Outcome Text

Number of farm and commodity organization members who increase their knowledge of the potential economic impacts of alternative farm commodity program provisions such as implications for exports, domestic utilization and price, farm income, and government farm program expenditures

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of research-based studies, publications, and reports for policy organization members and legislators on the consequences of their international trade and farm commodity program choices in Farm Bill and related federal legislation

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Provide research-based analysis of trade liberalization and market-oriented policies to guide government policy-makers as they draft appropriate legislation to increase the competitiveness of U.S. agriculture in a global market

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of agribusiness firms, private investors, commodity organization leaders, and government officials who increase their knowledge of the economic potential to increase the number and size of new and current value-added agricultural industries such as grain and livestock processing.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increase by 5% annually the number of new value-added agricultural associated small businesses in Indiana

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increase gross farm income of Indiana farmers by generating additional market opportunities for grain, livestock, and specialty crops

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Other

Description

Other: diffusion of new technology such as biotechnology or precision agriculture

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention
- Other

Description

Other: periodic assessment of policy choices made by state and national leaders

22. Data Collection Methods

- Sampling
- Mail
- On-Site
- Structured
- Case Study
- Journals

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Agricultural, Natural Resources, and Biological Engineering

2. Program knowledge areas

- 401 Structures, Facilities, and General Purpose Farm Supplies 19 %
- 405 Drainage and Irrigation Systems and Facilities 7 %
- 402 Engineering Systems and Equipment 27 %
- 404 Instrumentation and Control Systems 9 %
- 403 Waste Disposal, Recycling, and Reuse 38 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

Agricultural and biological engineering embraces a broad array of research challenges. Development of economical and technically efficient processes to transform agronomic crops and biomass into liquid fuels is critical for our nation's future. Interdisciplinary teams of scientists are investigating the role of enzymes, chemical interactions, and processing techniques to enhance the conversion of biological materials into fuels for on and off-road vehicles, aircrafts, and as heating oil. To reduce air pollution, monitoring studies of livestock operations are being conducted to assist the U.S. Environmental Protection Agency with the development of science-based regulatory guidelines. Engineering and life science faculty are collaboratively designing bio-sensors to more efficiently detect food pathogens and contaminants. Optimal nutrient management from large-scale livestock operations is critical from an environmental safety and a more efficient and profitable cropping systems perspective. Finally, with the advent of GPS and other electronic and nanotechnology discoveries new machine sensors and data collection and management systems are being developed. Purdue University faculty are collaborating not only on the research associated with these new engineering and life science-based systems, but are also closely involved in engagement activities with Federal and State regulatory agencies, farm and agribusiness managers, and community leaders as they share their research results. Enhanced environmental safety and increases in bio-fuels production are high priority policy issues in Indiana. A statewide energy summit, nutrient management workshops, and community-level extension education programs are being developed to share research results and dialogue with key stakeholders on the various aspects of this knowledge area.

6. Situation and priorities

There is rapidly growing public interest in bio-fuels and sustainable agricultural production systems. To achieve these societal goals to reduce U.S. dependence on foreign oil and to produce food and fiber in an environmentally acceptable manner, new technologies that embrace both the engineering and life sciences must come together. Purdue University faculty in several departments such as Agricultural and Biological Engineering, Agronomy, Food Science, Agricultural Economics, and others across the campus including several centers in Discovery Park will conduct collaborative research and disseminate research results, including the patenting and licensing of discoveries through the Office of Technology Commercialization, to industry leaders, policymakers, and the general public through educational programs, publications, websites, media releases, etc.

7. Assumptions made for the Program

While Federal formula and state funding will be essential to carry-out the applied research and extension aspects of this mission oriented program, large competitive extramural grants will be critical as well. University laboratories and infrastructure will be committed to efforts ranging from nanotechnology laboratories to more traditional bench science to pilot laboratory scale-ups to field and agronomic studies on the production, harvesting, storage, and transportation of bio-based crops. Team efforts including applied research and extension specialists in several disciplines will address nutrient management, especially directed towards the interface between the livestock and cropping sectors.

8. Ultimate goal(s) of this Program

These research and outreach efforts should reduce U.S. foreign oil dependency, increase the profitability of agriculture, reduce environmental degradation, and create job and economic development opportunities throughout rural America. Moreover, better nutrient management will increase the profitability of the

livestock sector, reduce the use of commercial fertilizer, and reduce water and air pollution

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	5.9	0.0	15.5	0.0
2008	5.9	0.0	15.5	0.0
2009	5.9	0.0	15.5	0.0
2010	5.9	0.0	15.5	0.0
2011	5.9	0.0	15.5	0.0

Outputs for the Program

13. Activity (What will be done?)

Energy workshops and educational programs will be conducted throughout the state that involve key research scientists ranging from chemical engineers to logistics experts to economists
A team of scientists including experts in animal nutrition, soil fertility, and farm management will conduct research and work with farmers to reduce water pollution, especially phosphorus
Food safety experts, along with microbiologists and nanotechnology experts, will develop sensors that will enhance food safety and risks from bioterrorism
Livestock facilities will be designed and analyzed to determine optimal nutrient management systems from an environmental and cropping systems perspective
Electro-hydraulic sensors and off-road machine operation systems will be designed and tested.
Scientists will monitor air quality of selected concentrated livestock systems on farms in multiple states to facilitate the determination of science-based EPA regulatory standards.

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations	• Public Service Announcement • Newsletters • TV Media Programs • Web sites • Other 1 (Extension Publications)

15. Description of targeted audience

Indiana livestock producers, especially those managing confined feeding operations
Crop farmers interested in applying animal wastes to enhance yields and reduce water pollution
Stakeholders in the bio-energy industry including Country Mark Cooperative, Indiana State Department of Agriculture, Indiana Soybean Alliance, Indiana Corn Growers, grain processors such as ADM, Cargill, and Tate & Lyle
Officials with federal (EPA) and state (IDEM) regulatory agencies
Off-road farm and industrial equipment manufacturers will be contacted and offered patent licensing opportunities as sensors for machine operation and maintenance are developed and tested

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	5000	40000	2500	5000
2008	5000	40000	2500	5000
2009	5000	40000	2500	5000
2010	5000	40000	2500	5000
2011	5000	40000	2500	5000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	3
2008	3
2009	3
2010	3
2011	3

18. Output measures

Output Text

Number of educational workshops and seminars on nutrient management and air quality

2007 Target: 500
2008 Target: 500
2009 Target: 500
2010 Target: 500
2011 Target: 500

Output Text

Number of research-based educational programs on bio-fuel production, distribution, and policy

2007 Target: 25
2008 Target: 25
2009 Target: 25
2010 Target: 25
2011 Target: 25

Output Text

Number of websites and publications developed

2007 Target: 200
2008 Target: 200
2009 Target: 200
2010 Target: 200
2011 Target: 200

Output Text

Number of patents applied for and licensing arrangements entered into with off-road farm and industrial equipment manufacturers

2007 Target: 5
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of producers who increase awareness and knowledge concerning science-based methods to manage animal wastes so as to minimize potential soil and air pollution

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percent reduction in environmental pollution from inappropriate application of animal wastes to soils or emission of animal odors from production facilities

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percentage change in number of farmers who enhance soil fertility and reduce soil pollution through less reliance on commercial fertilizer and increased reliance on properly applied animal waste

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of energy producers, farmers, and consumers who increase their knowledge of the technical and economic implications of increased use of Indiana produced corn and soybeans in bio-fuels

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of technologies developed and disseminated that will increase the efficiency of bio-fuel production

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percent increase in the use of Indiana produced corn and soybeans in bio-fuels

Outcome Type: Long

2007 Target: 0
2008 Target: 2
2009 Target: 2
2010 Target: 2
2011 Target: 2

Outcome Text

Number of farmers who increase their knowledge of livestock building designs that are energy efficient as well as more animal welfare friendly

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Optimize livestock welfare through the design of efficient and animal sensitive farm structures

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percentage increase in total livestock production and farmer profitability through the adoption of building designs that are energy efficient as well as more animal welfare friendly

Outcome Type: Long

2007 Target: 0
2008 Target: 2
2009 Target: 2
2010 Target: 2
2011 Target: 2

Outcome Text

Design livestock facilities that minimize odor emissions and potential air pollution

Outcome Type: Long

2007 Target: 5
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges

Description

{NO DATA ENTERED}

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparison between locales where the program operates and sites without program intervention
- Other

Description

Other: number of hits and use of web site educational material

22. Data Collection Methods

- Sampling
- Mail
- Telephone
- Structured
- Unstructured
- Case Study

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Food and Non-Food Products: Development, Processing, Quality, and Delivery

2. Program knowledge areas

- 503 Quality Maintenance in Storing and Marketing Food Products 18 %
- 512 Quality Maintenance in Storing and Marketing Non-Food Products 2 %
- 502 New and Improved Food Products 22 %
- 504 Home and Commercial Food Service 2 %
- 501 New and Improved Food Processing Technologies 31 %
- 511 New and Improved Non-Food Products and Processes 25 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

This program focuses on conversion of inorganic and organic materials into edible food products and non-food products. In the conversion of food materials, focused commodities will include pork (processing and quality), grains (processing and nutrition), dairy products (processing and quality), and aquaculture (processing, yield, and quality). Research and extension programs will be developed for better separation of bio-products, improved biomass conversion, and computational modeling approaches to understand and improve processes. Thermal and non-thermal processing systems will also be optimized to improve the overall product food quality and safety. Key research and extension integrated groups will include the Post-Harvest Processing Grain team and the Computer Integrated Food Manufacturing Center. For non-food products, much of the emphasis will be dedicated to bio-mass energy and bio-based fuels. Considerable expertise exists on the Purdue campus to develop alternative fuels from corn, soybeans, and starch. Systems will be designed that integrate agricultural and engineering approaches to optimize efficiency and yield and an economic analysis will be performed to identify appropriate applications. Because of the interest in Indiana, a major commodity that will receive attention is wood and wood products, especially for the conversion into furniture. Two important integrated research and extension groups that will be active in studying processing of non-food products include the Laboratory of Renewable Resources Engineering and the Wood Research Laboratory. In the development of both food and non-food products, effective and constant communication with stakeholders, from the farm to processing, will be critical for success.

6. Situation and priorities

Though consumers are the end beneficiary of well-engineered processed systems for food and non-food products, the product flow includes research and education spanning from growing crops in the field, to the harvesting of raw materials, through the different unit operations of processing, to production of the finished packaged product, and finally finishing with consumer marketing. The production of food and non-food related agricultural products are improved as engineering, agricultural, and economic scientists collaborate. To be successful, all of these disciplines must be well understood and then tested. The knowledge learned from basic and applied research projects will be translated through outreach programs directed to our stakeholders using a wide variety of delivery mechanisms. The overarching goal would be to improve processing efficiency and product quality and to translate this knowledge into practice. Without question, more efforts must be placed on studying and developing novel bio-based systems for alternative energy. The expertise at Purdue is well suited to study bio-based fuels and other opportunities related to production of food and non-food materials.

7. Assumptions made for the Program

The expectation is that funding will remain constant over the next five year period, but, there will be opportunities for increased funding in some areas. For example, funding for bio-based fuels is expected to grow as our country seeks alternatives to oil based energy and reliance on imported products. Seeking partnerships with foreign countries may also provide an important source of funding and opportunities to develop food and non-food processing technologies. Several integrated research and extension centers and groups will be collaborating to solve these problems. New strategically integrated teams will need to be assembled to confront new challenges.

8. Ultimate goal(s) of this Program

The goal of this overall program is to integrate agricultural and engineering disciplines and develop novel and effective processing technologies to improve the efficiency and quality of food and non-food products

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	3.5	0.0	14.5	0.0
2008	3.5	0.0	14.5	0.0
2009	3.5	0.0	14.5	0.0
2010	3.5	0.0	14.5	0.0
2011	3.5	0.0	14.5	0.0

Outputs for the Program

13. Activity (What will be done?)

· conduct research
· develop programs and conduct workshops
· develop extension curricula
· provide outreach training programs
· establish distance education programs and web-based programs
· coordinate meetings with important stakeholders (researchers, industry, farmers, regulatory, etc.)
· work with media

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations	• Public Service Announcement • Newsletters • TV Media Programs • Web sites • Other 1 (Extension Publications) • Other 2 (Distance Education Programs)

15. Description of targeted audience

There are a wide variety of intended audiences including:
Farmers
Animal production personnel
Plant production personnel
Biofuels processing industry personnel
Food manufacturing and processing plant personnel
Non-food manufacturing plant personnel
Professional engineers
State and county health departments
Federal regulatory officials
State industry associations

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
2007	1000	10000	100	1000
2008	1000	10000	100	1000
2009	1000	10000	100	1000
2010	1000	10000	100	1000
2011	1000	10000	100	1000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	1
2008	1
2009	1
2010	1
2011	1

18. Output measures

Output Text

Number of programs offered to farmers or production agriculture specialists

2007	Target:	10
2008	Target:	10
2009	Target:	10
2010	Target:	10
2011	Target:	10

Output Text

Number of programs offered to the food industry

2007	Target:	10
2008	Target:	10
2009	Target:	10
2010	Target:	10
2011	Target:	10

Output Text

Number of programs offered to the non-food industry

2007	Target:	5
2008	Target:	5
2009	Target:	5
2010	Target:	5
2011	Target:	5

Output Text

Number of research projects on bioprocessing

2007	Target:	5
2008	Target:	5
2009	Target:	5
2010	Target:	5
2011	Target:	5

Output Text

Number of research projects on air quality

2007	Target:	3
2008	Target:	3
2009	Target:	3
2010	Target:	3
2011	Target:	3

Output Text

Number of research projects on wood science and technology

2007 Target: 3
2008 Target: 3
2009 Target: 3
2010 Target: 3
2011 Target: 3

Output Text

Number of research projects on grain storage and processing

2007 Target: 5
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Output Text

Number of research projects related to dairy products

2007 Target: 3
2008 Target: 3
2009 Target: 3
2010 Target: 3
2011 Target: 3

Output Text

Number of research projects related to aquaculture products

2007 Target: 3
2008 Target: 3
2009 Target: 3
2010 Target: 3
2011 Target: 3

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of persons gaining knowledge in bioprocessing

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of products produced using new bioprocessing technologies

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increased number of new products produced by new bioprocessing, bioenergy, and biotechnology

Outcome Type: Long

2007 Target: 2
2008 Target: 2
2009 Target: 2
2010 Target: 2
2011 Target: 2

Outcome Text

Increased efficiency (%) with new bioprocessing techniques

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of persons gaining knowledge in food processing and food processing automation

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Numbers of persons or companies adopting new food automation technologies

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increased % use of food and non-food automation technologies

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of persons gaining knowledge in wood science and wood technologies

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Numbers of persons and companies involved in new wood technologies

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increased % production of furniture and other wood products

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of persons gaining knowledge in air quality control systems

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of farming operations using air quality control systems

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Numbers of animal production facilities adopting better air quality practices

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increased air quality % in production facilities

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of persons gaining knowledge in grain processing

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Numbers of persons and companies adopting better grain processing practices

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increased % yield of higher quality grain products

Outcome Type: Long

2007 Target: 0

2008 Target: 5

2009 Target: 5

2010 Target: 5

2011 Target: 5

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)
- Other

Description

Other: Emerging pests and pest control

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Comparison between locales where the program operates and sites without program intervention

Description

{NO DATA ENTERED}

22. Data Collection Methods

- Sampling
- Mail
- On-Site

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Family Well-Being

2. Program knowledge areas

- 802 Human Development and Family Well-Being 74 %
- 801 Individual and Family Resource Management 26 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

Indiana is responding to the Family Well Being Program with high priority. A diversity of programming has and will be offered to strengthen families to help them to learn and use positive, personal development and relationship skills and to teach parents to know and use positive parenting practices. Programs will help individuals increase their knowledge of effective financial management and improve their financial stability

6. Situation and priorities

Families are at the very heart of the strength and competitiveness of our state and nation. Difficult situations such as poverty, stress, lack of knowledge or positive parenting role models impede healthy family functioning. Changes in economic conditions, technological advances, evolving demographics, fluctuating employment patterns, and modifications of government policies alter the decision-making environment for families. These changes have contributed to individual and family stress and increased the difficulty of decision making.

In Indiana, there are 779,070 families. There are a number of statistics that illustrate the situations that cause stress in Indiana families. Studies show that child abuse deaths in Indiana are twice the national rate. Over 40% of U.S. families live off of 110% of their incomes. Twenty-three percent of Americans do not save anything at all on a monthly basis for long term goals such as retirement or a child's education. In 2001, 12.1% of children ages 0-17 in Indiana lived in poverty. Thirty-four percent of public school students in Indiana receive free or reduced-cost lunch. Between 2000 and 2040, the population 65 or older in Indiana will nearly double, from about 753,000 to nearly 1.5 million.

Indiana county-based needs assessments strongly indicated these areas of need:
In the area of financial management:
· ability to meet short-term financial needs;
· ability to achieve long-term financial goals;
· ability to protect selves and others from scams and frauds
In the area of human development:
· developing basic parenting skills
· supporting grandparents raising grandchildren
· building positive communication skills
· supporting aging and development in later life
· facilitating personal development including life skills, self-esteem, and conflict management

County and statewide programming assessments suggest that researchers need to communicate empirical findings and implications effectively, as some areas are prone to invasion by pop psychology approaches. Researchers and Extension Educators need to collaborate and communicate so effective methods of information dissemination and programming can be implemented.

7. Assumptions made for the Program

Research-based education can increase knowledge, build skills, and change behavior. Public policies can encourage families' asset-building.

Individuals and families can gain the knowledge and skills needed to enhance quality of life. The knowledge and skills needed to enhance quality of life are not innate, they must be learned. What impacts one family member impacts all members of the family system. The social and financial costs of not having healthy individuals and families are a major societal burden that can be prevented.

We would expect funding opportunities to increase or remain constant during the five year period. Partnering with other stakeholders will also be a key to increase positive impact.

8. Ultimate goal(s) of this Program

· Strengthen the capacity of individuals and families to establish and maintain economic security and a quality emotional environment throughout their lives
· Maximize the psychological, social, physical, financial, and emotional well-being of Indiana residents
· These goals will be accomplished through non-formal educational opportunities that increase knowledge, influence attitudes, teach skills, inspire aspirations, and promote behavior changes

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	4.0	0.0	4.0	0.0
2008	4.0	0.0	4.0	0.0
2009	4.0	0.0	4.0	0.0
2010	4.0	0.0	4.0	0.0
2011	4.0	0.0	4.0	0.0

Outputs for the Program

13. Activity (What will be done?)

· Conduct workshops
· Provide training
· Develop web-based and distance educational materials
· Work with the media

- Conduct research
- Create Displays
- Collaborate with other agencies

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations	• Public Service Announcement • Newsletters • TV Media Programs • Web sites • Other 1 (Distance Education)

15. Description of targeted audience

immigrants
welfare-to-work individuals
job loss individuals
youth
adults
limited resource families
farm families
families in divorce
child care professionals
trainers of child care professionals
policy makers
parents
volunteers that work with parents
elder caregivers
adult children
retirement associations
community leaders
planners

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	38800	157400	19100	72600
2008	40000	160000	19500	73000
2009	40250	160500	19750	73250
2010	49500	160750	20000	74000
2011	49750	161000	20250	74500

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	0
2011	0

18. Output measures

Output Text

Number of staff development opportunties for Extension Educators

2007 Target: 5
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Output Text

Number of programs offered to parents, childcare providers, youth, adults, low-wealth households and consumers

2007 Target: 50
2008 Target: 50
2009 Target: 50
2010 Target: 50
2011 Target: 50

Output Text

Number of research projects

2007 Target: 3
2008 Target: 3
2009 Target: 3
2010 Target: 3
2011 Target: 3

Output Text

Number of publications

2007 Target: 2
2008 Target: 2
2009 Target: 2
2010 Target: 2
2011 Target: 2

Output Text

Number of web sites developed

2007 Target: 0
2008 Target: 1
2009 Target: 0
2010 Target: 0
2011 Target: 1

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text
Number of participants who increased their knowledge of debt management

Outcome Type: Short
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants who adopted one or more practices to reduce debt

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants reporting decreased debt

Outcome Type: Long
2007 Target: 50
2008 Target: 75
2009 Target: 100
2010 Target: 125
2011 Target: 150

Outcome Text
Number of participants who increased their knowledge of the benefits of saving on a regular basis

Outcome Type: Short
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants who increased the amount of money they save regularly

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants who save regularly

Outcome Type: Long
2007 Target: 250
2008 Target: 300
2009 Target: 350
2010 Target: 400
2011 Target: 450

Outcome Text
Number of participants who increased their knowledge of basic personal financial management

Outcome Type: Short
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants who have established financial goals to guide financial decisions

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants who develop a plan for achieving financial security

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants who report increased financial security

Outcome Type: Long
2007 Target: 250
2008 Target: 300
2009 Target: 350
2010 Target: 400
2011 Target: 450

Outcome Text
Number of participants who increased their knowledge of childcare and how to manage care giving roles and responsibilities

Outcome Type: Short
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants who increased their knowledge of decision making skills necessary to make quality of life decisions for caregivers and receivers

Outcome Type: Short
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of child care professionals who are working toward or who have obtained the Child Development Accreditation

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Increased number of child care slots

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Increased number of child care professional positions

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Increase in number of quality and affordable child care facilities

Outcome Type: Long
2007 Target: 5
2008 Target: 10
2009 Target: 15
2010 Target: 20
2011 Target: 25

Outcome Text
Number of participants who increased their knowledge of basic parenting skills

Outcome Type: Short
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants reporting improved parent-child communication

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of participants reporting significant improvement in satisfaction and quality of parent-child relationships

Outcome Type: Long
2007 Target: 50
2008 Target: 50
2009 Target: 50
2010 Target: 50
2011 Target: 50

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

Description

{NO DATA ENTERED}

21. Evaluation studies planned

- After Only (post program)
- Before-After (before and after program)

Description

{NO DATA ENTERED}

22. Data Collection Methods

- Sampling
- Mail
- Telephone
- On-Site
- Observation
- Journals
- Other

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Human Nutrition, Food Safety and Human Health and Well-Being

2. Program knowledge areas

- 711 Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sourc 7 %
- 701 Nutrient Composition of Food 1 %
- 723 Hazards to Human Health and Safety 16 %
- 712 Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi 28 %
- 703 Nutrition Education and Behavior 11 %
- 721 Insects and Other Pests Affecting Humans 7 %
- 702 Requirements and Function of Nutrients and Other Food Components 30 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

Our integrated program for food safety, human health, and nutrition includes a wide variety of disciplines in the college of agriculture, the veterinary school, and the college of consumer and family sciences. Purdue food safety programs focus efforts toward rapid detection of foodborne pathogens, grain processing and control of molds and mycotoxins, non-thermal and thermal food processing treatments to reduce/eliminate pathogens and spoilage organisms, pest control and integrated pest management programs, the impact of human intestinal microflora and human disease, and food safety educational programs for farmers, retailers, and consumers. Examples of food safety integrated multi-disciplinary centers and efforts include the Center for Food Safety Engineering, the Center for Urban and Industrial Pest Management, and the Extension Disaster Education Network. Purdue human nutrition and human health programs focus on the impact of dietary intake and exercise on human health, use and beneficial effects of phytochemicals, cereal processing and nutrition, calcium and bone metabolism, impact of dietary intake and bone health, and nutritional educational programs for the food industry, healthcare, industry professionals, and consumers. Examples of human health and nutrition related research and extension integrated efforts include the Agriculture and Rural Safety and Health Program, Dietary Calcium and Human Health program, and Healthy Well Nourished Hoosiers.

6. Situation and priorities

In the United State alone, over 76 million cases of foodborne illness are reported each year, leading to over 5,000 deaths and 325,000 hospitalizations, costing Americans billions of dollars. Of most concern are inherent foodborne pathogens such as Norwalk virus, Campylobacter, Salmonella, E. coli, and Listeria. Since 9/11/2001, a major emphasis for the food industry and regulatory agencies is the threat of intentionally contaminated food systems. Research efforts need to focus on detection and control, and educational efforts should translate this information to optimize food handling practices. Our food systems are also exposed to a wide variety of quality degrading challenges from production agriculture practices (i.e. pest control), through transportation systems (i.e. temperature control), at processing (i.e. sanitation), in retail food establishments and at consumer homes (i.e. food handler contamination). Providing best practices and implementing effective educational programs leads to a higher quality and more profitable food system. As consumer lifespan increases, resulting in a more immuno-compromised population, the emphasis on human health heightens. Researchers need to understand and communicate the effects of food consumption and the impact of beneficial ingredients to improve human health. One area of specific interest is an understanding of the health benefits and potential uses of nutraceuticals and functional foods. Other areas under study, relative to nutrition, include factors that affect onset of diabetes and obesity in humans

7. Assumptions made for the Program

A tremendous amount of food safety, food defense, and human nutrition research and outreach programs have been identified nationwide for the next five years. We would expect funding opportunities to increase or remain constant during the five year period. To be more effective and more competitive, we recognize the need to further integrate research and extension efforts and to build multidisciplinary teams. Partnering with industry, regulatory agencies, and other stakeholders will also be a key strategic movement to increase our impact.

8. Ultimate goal(s) of this Program

The goal of this overall program is integrate our research, outreach, and educational efforts to enhance the safety and quality of the food

supply and to improve human health through development of more nutritious and healthy foodstuffs.

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	15.5	0.0	53.5	0.0
2008	15.5	0.0	53.5	0.0
2009	15.5	0.0	53.5	0.0
2010	15.5	0.0	53.5	0.0
2011	15.5	0.0	53.5	0.0

Outputs for the Program

13. Activity (What will be done?)

Research-based programs will focus on conducting research experiments and programs emphasizing our key interest areas including
detection and control of foodborne pathogens,
effects of diet and nutrition on human health,
beneficial effects of nutrition, functional foods and biomedical research, and
nutritional impact on chronic diseases including diabetes, heart disease, and obesity
A wide variety of programs will be delivered to our targeted audiences. Some programs will include a complete development of curriculum, while others will involve the use of readily available programs used in other states and/or available for purchase through different organizations. Our output effort will include:
partnering with important stakeholders
development of workshop materials and curricula
conducting workshops
development of web-based and distance education materials
working with the media
As we move from 2007-2011, we should expect to increase our offerings through distance education and/or web-based materials. Most programs involve some type of collaboration or partnerships with our stakeholders, with industry, with consumers, or with regulatory agencies. Evaluation tools vary greatly depending on the intended audience and program type ranging from surveys, to pre-and post test, to national certification exams, and intensive follow up surveys to better assess knowledge gain.

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations • Other 1 (Hands-on training)	• Public Service Announcement • Newsletters • TV Media Programs • Web sites • Other 1 (Distance Education programs) • Other 2 (Extension publications)

15. Description of targeted audience

There are a wide variety of intended audiences including:

- Animal production personnel
- Plant production personnel
- Food manufacturing and processing plant personnel
- The transportation industry
- Foodservice and food retail workers
- Consumers
- Healthcare
- Day care
- Nursing homes
- Youth
- State and county health departments
- Federal regulatory officials
- State industry associations
- First Responders

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	3000	20000	300	2000
2008	3000	20000	300	2000
2009	3000	20000	300	2000
2010	3000	20000	300	2000
2011	3000	20000	300	2000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	2
2008	2
2009	2
2010	2
2011	2

18. Output measures

Output Text

Number of programs offered to consumers

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Output Text

Number of programs offered to the food industry

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Output Text

Number of research projects on food safety, human nutrition, and health

2007 Target: 25
2008 Target: 25
2009 Target: 25
2010 Target: 25
2011 Target: 25

Output Text

Number of nutrition related research publications

2007 Target: 4
2008 Target: 4
2009 Target: 4
2010 Target: 4
2011 Target: 4

Output Text

Number of research publications related to detection of foodborne pathogens

2007 Target: 5
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Output Text

Number of research publications related to control of foodborne hazards

2007 Target: 4
2008 Target: 4
2009 Target: 4
2010 Target: 4
2011 Target: 4

Output Text

Number of research publications related to food defense and protection

2007 Target: 2
2008 Target: 2
2009 Target: 2
2010 Target: 2
2011 Target: 2

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of persons who increased their knowledge of proper hand washing

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who increased their knowledge of cooking foods adequately

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who increased their knowledge of avoiding cross-contamination

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who increased their knowledge of keeping food at a safe temperature

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who increased their knowledge of storing foods properly

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants passing food handler certificate

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants entering or being retained in the food service workforce as a result of training

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Decreased % incidence of food borne illness associated with unsafe food handling practices

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Decreased % mortality due to unsafe food handling practices

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of persons who increased their knowledge of the connection between food choices and risk of chronic disease.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who increased their knowledge of selection and preparation of foods with reduced fat and/or calories

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who increased knowledge of USDA serving sizes

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants consuming appropriate USDA serving sizes

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants demonstrating ability to choose or prepare foods with reduced fat and/or calories

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Decreased % risk factors for chronic disease (including diabetes, heart disease, obesity)

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Decreased % chronic disease complications (including diabetes, heart disease, obesity)

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

Outcome Text

Number of persons who increase knowledge of the relationship between nutrition and health

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who increased their knowledge of physical activity recommendations

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of persons who adopt one or more practices to improve food choices and activity levels

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percentage of participants that report reduced medical costs because of changes in food choices and activity levels

Outcome Type: Long

2007 Target: 0
2008 Target: 5
2009 Target: 5
2010 Target: 5
2011 Target: 5

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)
- Other

Description

Other: State and National priorities

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Other

Description

Other: Success and pass rate on passing regulatory certification exams

22. Data Collection Methods

- Sampling
- Mail
- On-Site

Description
{NO DATA ENTERED}

1. Name of the Planned Program

Natural Resources and Environment

2. Program knowledge areas

- 123 Management and Sustainability of Forest Resources 14 %
- 111 Conservation and Efficient Use of Water 2 %
- 133 Pollution Prevention and Mitigation 17 %
- 112 Watershed Protection and Management 13 %
- 131 Alternative Uses of Land 9 %
- 102 Soil, Plant, Water, Nutrient Relationships 26 %
- 132 Weather and Climate 7 %
- 135 Aquatic and Terrestrial Wildlife 7 %
- 104 Protect Soil from Harmful Effects of Natural Elements 3 %
- 101 Appraisal of Soil Resources 2 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

The integrated research and extension programs in Natural Resources and Environment include faculty and staff from 8 departments within the College of Agriculture. One of the primary segments of the program involves increasing knowledge of the relationship between soils, nutrients, and plants. Another goal is increasing and improving the productivity of forest resources, particularly hardwoods. Programs will teach landowners and land managers to evaluate the condition of lands and undertake management and restoration activities. A number of activities are aimed at preventing or mitigating pollution of natural resources, whether from natural causes or as a result of human activity. The mission of the Animal Manure Management Common Interest Group is to provide current scientifically sound information and technologies that are economically sound, feasible for implementation and promote environmental stewardship to livestock and poultry producers, technical service providers and consultants, government officials and the general public. The Water Quality Common Interest Group will address non-point sources of water pollution and loss of riparian habitat by working with land owners and managers to participate in collaborative watershed planning and adoption of sustainable land use practices. Programs will also be offered to enhance the natural components of urban environments through promotion of urban forestry.

6. Situation and priorities

Indiana residents want to live in aesthetically pleasing urban and rural environments, with ready access to well managed forests and wildlands. They want air and water resources that are free from pollution. At the same time, the production of crops and livestock and harvesting of timber, especially hardwoods, are important contributors to the economy of the state. Research is necessary to generate the knowledge that will allow these agricultural enterprises to flourish while providing Indiana residents with the quality of environment that they desire. Extension programs will provide assistance to farmers, ranchers, land owners, and land managers that will enable them to maintain their enterprises in a profitable, yet environmentally sustainable manner.

7. Assumptions made for the Program

The increasing urban/rural interface will require that farmers, ranchers, and land owners learn to coexist with urban and rural residents. Research and Extension programs will provide producers with the knowledge and skills they need to maintain their enterprises in an economically viable manner, while minimizing negative impacts on the environment and their neighbors. Extension programs can also successfully teach urban and rural residents about the importance of agricultural production to the economy of the state and encourage dialogue between these two groups.

8. Ultimate goal(s) of this Program

Watershed stakeholders will collaborate effectively to develop and implement plans to protect and restore water resources.
Owners of wildlands and their professional advisors will have the skills necessary to meet the objectives of the owners in a sustainable and

ecologically sound manner.
To equip the livestock and poultry producers with the knowledge and current information to comply with regulations, make wise decisions for manure management systems design, and management and implementation of new scientifically and economically sound technologies for operation.
To inform crop and livestock producers in the value of optimal use of manure nutrients as fertilizer in crop production.
The urban and suburban communities of Indiana will provide their residents with aesthetically pleasing environments in which to live and work.

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	12.0	0.0	32.0	0.0
2008	12.0	0.0	32.0	0.0
2009	12.0	0.0	32.0	0.0
2010	12.0	0.0	32.0	0.0
2011	12.0	0.0	32.0	0.0

Outputs for the Program

13. Activity (What will be done?)

Workshops
Extension publications
Public service announcements
Research
Web site development
Home and farm visits
Displays
IP video programs
Demonstrations and field days
One-on-one consultations
Collaboration with sister agencies

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations	• Public Service Announcement • Newsletters • Web sites • Other 1 (Extension publications)

15. Description of targeted audience

Agricultural producers
Rural and urban residents
Elected officials and other decision-makers
Owners of private and public wildlands
Natural resource professionals
Technical service providers
Tree care providers
Right of way managers
Urban planners
Youth

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	23000	125000	6000	35000
2008	23000	125000	6000	35000
2009	23000	125000	6000	35000
2010	23000	125000	6000	35000
2011	23000	125000	6000	35000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	0
2011	0

18. Output measures

Output Text

Number of programs offered to producers, land owners, and land managers.

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Output Text

Number of research projects

2007 Target: 25
2008 Target: 25
2009 Target: 25
2010 Target: 25
2011 Target: 25

Output Text

Number of demonstrations and field days

2007 Target: 10
2008 Target: 10
2009 Target: 10
2010 Target: 10
2011 Target: 10

Output Text

Number of publications

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of participants who increase knowledge of practices to protect water resources

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who improve decision making for use of water resources

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who increase knowledge of proper application of fertilizer, manure and waste products to soil and potential for environmental consequences of misapplication

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who increased adoption of proper application of fertilizer, manure and waste products to soil

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who increase knowledge of best management practices for optimal manure nutrient utilization with on- and off-site agricultural lands

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who adopt best management practices for optimal manure nutrient utilization with on- and off-site agricultural lands

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who increase knowledge of the value of ponds in landscapes and methods for installing and managing ponds

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who increase value of landscapes through better installation and management of ponds

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who increase knowledge of on-site wastewater treatment siting and maintenance needs

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of participants who make more informed decisions for on-site wastewater treatment siting and maintenance

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percentage reduction in the number of water quality violations related to animal production and land application in the state of Indiana

Outcome Type: Long

2007 Target: 5
2008 Target: 10
2009 Target: 15
2010 Target: 20
2011 Target: 25

Outcome Text

At least 15 percent of the tree care providers in Indiana will be certified arborists.

Outcome Type: Short

2007 Target: 15
2008 Target: 15
2009 Target: 15
2010 Target: 15
2011 Target: 15

Outcome Text

Number of professional natural resource advisors who have the skills necessary to assess the health of the wildlands

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Owners of 15 percent of wildlands will have a relationship with knowledgeable professional natural resource advisors and have developed and implemented a management plan

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Natural resource professionals and wildland owners who have developed and implemented management plans will work with an additional 20 percent of landowners to develop and implement management plans.

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percentage of owners of wildlands who will have assessed the health of their lands and developed and implemented management plans

Outcome Type: Long

2007 Target: 15
2008 Target: 17
2009 Target: 20
2010 Target: 24
2011 Target: 30

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

Description

{NO DATA ENTERED}

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants

Description

{NO DATA ENTERED}

22. Data Collection Methods

- Sampling
- Mail
- Telephone
- On-Site
- Case Study
- Observation

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Plants and Their Systems

2. Program knowledge areas

- 215 Biological Control of Pests Affecting Plants 3 %
- 216 Integrated Pest Management Systems 9 %
- 202 Plant Genetic Resources 3 %
- 205 Plant Management Systems 16 %
- 201 Plant Genome, Genetics, and Genetic Mechanisms 12 %
- 212 Pathogens and Nematodes Affecting Plants 14 %
- 213 Weeds Affecting Plants 9 %
- 211 Insects, Mites, and Other Arthropods Affecting Plants 15 %
- 206 Basic Plant Biology 11 %
- 203 Plant Biological Efficiency and Abiotic Stresses Affecting Plants 8 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

Research and Extension programs will be conducted to discover and disseminate knowledge that will help row crop producers (primarily corn and soybean, along with wheat and forages) and horticultural crop growers (fruit, vegetables, and ornamental plants) produce their crops more efficiently, with less adverse effects on the environment, and in a way that strengthens rural economies. One of the fastest growing areas is the turfgrass industry, with a proliferation of golf courses, athletic fields, and landscapes requiring maintenance. Research and Extension programming will support these professionals. The Small Farms and Sustainable Agriculture Team will assist entrepreneurs in establishing small or alternative agricultural enterprises, through professional development opportunities for educators and through direct programming for potential producers. The Consumer Horticulture Team will provide professional development opportunities for county Extension educators to assist them in answering the ever-increasing number of requests for information on home horticulture.

6. Situation and priorities

Row crop producers are faced with significant challenges resulting from low commodity prices, higher fixed and variable input costs, and increasing governmental regulation. Other than ceasing production, the two viable options for row crop producers are to become more efficient or to switch to alternative enterprises. The Cropping Systems Common Interest Group provides programming to assist farmers to produce crops more efficiently and the Small Farms and Sustainable Agriculture Team assists producers in beginning new or alternative enterprises. Horticultural crop production continues to be a small, but significant part of the rural economy. Horticultural producers also must look for greater efficiencies and new niche markets to exploit to remain viable. Turfgrass management is a rapidly expanding area that requires an increased research base and greater Extension programming to meet the demands of this important sector. Home horticulture is a very popular pastime for many homeowners, many of whom have limited experience with growing plants and require a good deal of assistance from county Extension educators.

7. Assumptions made for the Program

Because of the large number of row crop producers, often the best strategy for reaching the maximum number of people is to train information providers such as Extension educators, Certified Crop Advisors, crop consultants, industry personnel, etc. This train-the-trainer model has worked well for many years and will continue to be the primary method for information dissemination. Turfgrass managers and horticultural crop producers are less numerous and are generally trained directly. Home horticulture questions are extremely numerous and are handled mostly through the county Extension offices.

8. Ultimate goal(s) of this Program

To discover and deliver information that will help row crop producers address current issues as well as longer-term production efficiency parameters in crop, pest, nutrient, and related soil/water management areas in new and innovative ways.
Horticultural enterprises will improve production techniques, pest control, crop selection, yield, and product quality while maintaining

sustainability.
Through applied research, more sustainable management programs and more efficient integrated pest management programs for turfgrass will be created.
Increased knowledge of Indiana's citizens in proper landscape and garden management, including opportunities for volunteers and youth.
Economically and socially strengthened rural communities by providing educational opportunities for establishment of small farms, alternative enterprises, and a more sustainable agriculture.

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	34.0	0.0	49.0	0.0
2008	34.0	0.0	49.0	0.0
2009	34.0	0.0	49.0	0.0
2010	34.0	0.0	49.0	0.0
2011	34.0	0.0	49.0	0.0

Outputs for the Program

13. Activity (What will be done?)

Conduct meetings, conferences, and workshops
Publish newsletters and Extension publication
Establish web sites
Field days
Demonstration plots
Telephone consultations
Applied research
Mass media
Short courses

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations	• Public Service Announcement • Newsletters • TV Media Programs • Web sites • Other 1 (Extension publications)

15. Description of targeted audience

Agricultural crop producers
Crop consultants
Agribusinesses
Landowners
Horticultural producers
Professionals involved with golf courses, lawn care, sod production, athletic turf, and grounds
Individuals and families interested in small farms or alternative enterprises
Homeowners
Youth

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	175000	400000	20000	500000
2008	175000	400000	20000	500000
2009	175000	400000	20000	500000
2010	175000	400000	20000	500000
2011	175000	400000	20000	500000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	1
2008	1
2009	1
2010	1
2011	1

18. Output measures

Output Text

Number of programs offered to producers, horticultural enterprises, Master Gardeners, etc.

2007 Target: 500
2008 Target: 500
2009 Target: 500
2010 Target: 500
2011 Target: 500

Output Text

Number of research projects.

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Output Text

Number of research publications.

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Output Text

Number of Extension publications, new or revised.

2007 Target: 200
2008 Target: 200
2009 Target: 200
2010 Target: 200
2011 Target: 200

Output Text

Number of volunteers trained to assist with information and programs.

2007 Target: 500
2008 Target: 500
2009 Target: 500
2010 Target: 500
2011 Target: 500

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of crop producers who increase knowledge of integrated pest management practices

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of acres of field crops (corn, soybeans, forage, small grains) in which pests are managed using an integrated pest management system.

Outcome Type: Medium

2007 Target: 3000000
2008 Target: 3000000
2009 Target: 3000000
2010 Target: 3000000
2011 Target: 3000000

Outcome Text

Number of crop producers who increase knowledge of best management practices in crop, nutrients, and related soil/water decisions.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of producers who adopt best management practices in crop, nutrient, and related soil/water decisions.

Outcome Type: Medium

2007 Target: 100
2008 Target: 200
2009 Target: 300
2010 Target: 400
2011 Target: 500

Outcome Text

Number of horticultural enterprises who increase knowledge of new and appropriate technologies and effective cropping practices to produce high quality products while protecting, preserving and sustaining their land and the regional environment

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of horticultural enterprises who adopt new and appropriate technologies and effective cropping practices to produce high quality products while protecting, preserving and sustaining their land and the regional environment

Outcome Type: Medium

2007 Target: 10
2008 Target: 20
2009 Target: 30
2010 Target: 40
2011 Target: 50

Outcome Text

Number of Indiana citizens who increase knowledge of proper landscape and garden management.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of volunteers who increase knowledge of consumer horticulture to serve as first detectors for symptoms of invasive species.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of professional turf managers who increase knowledge of pesticides, nutrients, and water inputs for maintaining high quality turf.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of professional turf managers who reduce pesticide, nutrient, and water inputs while maintaining high quality turf.

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increase percentage of high quality turf will be maintained with reduced pesticides, nutrient and water inputs.

Outcome Type: Long

2007 Target: 5

2008 Target: 10

2009 Target: 10

2010 Target: 15

2011 Target: 15

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

Description

{NO DATA ENTERED}

21. Evaluation studies planned

- After Only (post program)
- Before-After (before and after program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparison between locales where the program operates and sites without program intervention

Description

{NO DATA ENTERED}

22. Data Collection Methods

- Sampling
- Mail
- Telephone
- On-Site
- Structured
- Case Study
- Observation

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Animals and Their Systems

2. Program knowledge areas

- 306 Environmental Stress in Animals 3 %
- 307 Animal Management Systems 9 %
- 303 Genetic Improvement of Animals 7 %
- 308 Improved Animal Products (Before Harvest) 8 %
- 301 Reproductive Performance of Animals 6 %
- 305 Animal Physiological Processes 3 %
- 304 Animal Genome 13 %
- 302 Nutrient Utilization in Animals 31 %
- 315 Animal Welfare/Well-Being and Protection 8 %
- 311 Animal Diseases 12 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

Research projects will be targeted at understanding the biology of poultry and livestock at the molecular, cellular, and systemic level, and improving the profitability of poultry and livestock production while minimizing environmental impacts on production and enhancing the health and well-being of animals. Specific efforts will span fundamental areas of growth and development, animal behavior and well-being, and sustainable and efficient production systems, using a multi-disciplinary approach. Research projects will also investigate the efficient use of by-products and co-products from ethanol and biofuels production facilities as feed for poultry and/or livestock. Extension activities will seek to improve producers' management skills to improve economic viability, enhance environmental stewardship, improve awareness among youth of the opportunities in poultry and livestock production, and to promote a positive image of poultry and livestock production in Indiana. These activities will be accomplished through publications, workshops, road-shows, and on-farm assistance. In addition, Extension programs will be presented for small livestock and poultry producers, in which often the producer has limited technical knowledge or experience or is attempting to use alternative production techniques.

6. Situation and priorities

Livestock and poultry production has been either stable or increasing in recent years in Indiana. The Indiana Department of Agriculture has proposed to double pork production in Indiana, while poultry and dairy production also continue to grow. Continued expansion and growth of livestock and poultry facilities along with rising interest in naturally grown and organic production have broadened the spectrum of poultry and livestock production. The two primary challenges facing the industry are profitability and the effects of production on the environment (water and air). Modern poultry and livestock production requires keen management skills to maintain profitability in the face of shrinking margins per animal. Livestock and poultry producers require information to help them decide on appropriate technologies and management practices to control costs or increase revenues. Value added production and niche marketing will provide opportunities for some. The continued movement of urban dwellers to rural habitats has increased the need for improved environmental stewardship in animal production. Planning and zoning committees in local communities will require factual information to help them make decisions with regard to siting animal agriculture. Ongoing public scrutiny of animal husbandry practices requires development of management strategies to improve animal health and well-being and to assess the welfare of animals on farms.

7. Assumptions made for the Program

Considerable research data are available to help improve efficiency of animal production systems, environmental stewardship in animal production facilities, and the health and well-being of poultry and livestock. However, continued changes in knowledge, environmental regulations, consumer demands, and public concerns about the products, methods, and effects of animal production will require a renewed focus on interdisciplinary research to address these issues. Likewise, Extension programs to carry the latest research information to traditional producers will continue to be important. Additionally, non-traditional producers, such as small land owners, organic producers, local planning and zoning committees, and others will become an increasingly important audience for Extension programs. These plans are

contingent upon maintaining at least level funding from Federal and State agencies.

8. Ultimate goal(s) of this Program

To improve management skills of poultry and livestock producers, leading to improved economic viability.
To enhance environmental stewardship among Indiana's poultry and livestock producers.
To increase the knowledge and awareness of opportunities in the poultry and livestock industry for Indiana's youth.
To promote a positive image of poultry and livestock production in Indiana.
To promote alternative agricultural enterprises related to poultry and livestock production.

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	20.0	0.0	50.0	0.0
2008	20.0	0.0	50.0	0.0
2009	20.0	0.0	50.0	0.0
2010	20.0	0.0	50.0	0.0
2011	20.0	0.0	50.0	0.0

Outputs for the Program

13. Activity (What will be done?)

· Foster leadership and economic development and facilitate strong partnerships and participation in state, regional, national, and international agencies, organizations, and groups.
· Develop collaborative, multidisciplinary approaches that respond to short- and long-term educational needs and issues.
· Encourage participation by extension specialists in: Taskforces, Review Committees, Advisory Boards, Editorial Boards, Commodity committees/boards, Invited presentations, Honors and Awards, Common Interest Groups, Professional Societies
Complete "needs assessment" for each species
· Develop publications, workshops, consultations, seminars, certification programs, distance education modules, field days, and other opportunities.

· Increase number of participants in life-long learning programs.

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
● Education Class ● Workshop ● Group Discussion ● One-on-One Intervention ● Demonstrations ● Other 1 (Distance education events)	● Newsletters ● Web sites ● Other 1 (Publications)

15. Description of targeted audience

· Poultry and Livestock Producers
· Farm employees
· Nutritionists and consultants
· Veterinarians
· Small flock/herd owners
· Youth
· Consumers
· County officials
· Government Officials

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	40000	200000	10000	50000
2008	40000	200000	10000	50000
2009	40000	200000	10000	50000
2010	40000	200000	10000	50000
2011	40000	200000	10000	50000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	1
2008	1
2009	1
2010	1
2011	1

18. Output measures

Output Text

Number of educational workshops and seminars offered to poultry and livestock producers

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Output Text

Number of websites and publications developed

2007 Target: 100
2008 Target: 100
2009 Target: 100
2010 Target: 100
2011 Target: 100

Output Text

Number of research projects

2007 Target: 50
2008 Target: 50
2009 Target: 50
2010 Target: 50
2011 Target: 50

Output Text

Number of consultations

2007 Target: 25
2008 Target: 25
2009 Target: 25
2010 Target: 25
2011 Target: 25

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of poultry and livestock producers who increase their knowledge of up-to-date information and technologies, management practices, and value-added opportunities

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of poultry and livestock producers who adopt up-to-date information and technologies.

Outcome Type: Medium
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text
Number of livestock producers adopting practices to enhance sustainability of their operations.

Outcome Type: Long
2007 Target: 0
2008 Target: 10
2009 Target: 20
2010 Target: 30
2011 Target: 40

Outcome Text
Number of livestock producers expanding their operations.

Outcome Type: Long
2007 Target: 0
2008 Target: 10
2009 Target: 20
2010 Target: 30
2011 Target: 40

Outcome Text
Number of poultry and livestock producers utilizing animal welfare assessments to enhance their management systems.

Outcome Type: Long
2007 Target: 0
2008 Target: 2
2009 Target: 5
2010 Target: 8
2011 Target: 10

Outcome Text
Number of poultry and livestock producers who increased their knowledge of environmental stewardship practices and environmental regulations.

Outcome Type: Short
2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of poultry and livestock producers adopting management practices that maximize environmental stewardship.

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of poultry and livestock producers developing comprehensive nutrient management plans.

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Percentage change in number of poultry and livestock producers who enhance soil fertility and reduce soil pollution through properly applied animal waste

Outcome Type: Long

2007 Target: 0
2008 Target: 2
2009 Target: 2
2010 Target: 2
2011 Target: 2

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

Description

Pricing systems for livestock and poultry tend to be very cyclical. As such research, to some degree and, especially extension programs, need to be responsive to rapid, and sometimes dramatic changes in economic viability of production units. Whole program focuses can change quickly in the face of an economic crisis in one or more of the livestock and poultry sectors.

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants

Description

{NO DATA ENTERED}

22. Data Collection Methods

- Sampling
- Whole population
- Mail
- Telephone
- On-Site
- Structured
- Case Study
- Observation
- Tests

Description

{NO DATA ENTERED}

1. Name of the Planned Program

Economic and Community Development

2. Program knowledge areas

- 803 Sociological and Technological Change Affecting Individuals, Families and Communities 3 %
- 805 Community Institutions, Health, and Social Services 17 %
- 608 Community Resource Planning and Development 80 %

3. Program existence

- Intermediate (One to five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

This planned program area includes five focus areas: Entrepreneurship, Community Planning and Visioning, Workforce Development, Leadership and Civic Engagement, and Public Issues Education. The following is a brief summary of these focus areas. Collectively they represent a summary of this planned program area.

Entrepreneurship. Economic development strategies have shifted from industrial recruitment to (a) the retention and expansion of existing firms and (b) the creation of new businesses. Specific areas of emphasis are small businesses, especially in rural areas; new opportunities in entrepreneurial agriculture and natural resource enterprises (e.g., agritourism); and the strong and growing interest in entrepreneurship among youth and young adults, women, ethnic minorities, and new immigrants.

Community Planning and Visioning. Communities, neighborhoods, and regions need to create their own road map for the future in today's fast paced world of change. Two areas of high priority in many communities and regions are economic development planning/strategies and land use issues. While Extension's visioning and planning efforts will not be limited to these areas, they will receive special emphasis.

Workforce Development.
Extension, in partnership with Purdue's Division of Continuing Education, has been heavily involved in creating several community based learning centers. These centers provide a variety of credit and non-credit offerings based entirely on local demand, using both face to face and distance-education technologies. Extension will continue to nurture existing learning centers and be as helpful as possible to other communities and neighborhoods that wish to consider the establishment of such a center. Workforce development opportunities and programs will receive special emphasis.

1. Leadership and Civic Engagement. A rapidly growing body of research
indicates a strong civic infrastructure is a precursor to economic development and in the creation of strong and vibrant communities, neighborhoods, and regions. Extension can help build strong communities, neighborhoods, and community-based organizations through a variety of leadership programs including Leadership 20/20, i-LEaD, the Master Gardener Leadership Program, and a new Natural Resources Leadership Development Institute.

Public Issues Education. Purdue Extension is playing a key role in Purdue's university-wide engagement effort. When community and regional needs arise at the local level which cannot be addressed by an existing Extension program, Extension personnel can help identify and access specialized resources at Purdue that may be helpful in addressing the need or issue. Training and resources are also available to help communities manage controversial public issues. Finally, policy analysis and applied research by faculty on Purdue's campus is critical to informed decision making. Areas of potential emphasis include energy policy, agricultural and environmental policy, and a variety of issues related to state and local government taxation and finance.

6. Situation and priorities

There are at least two types of communities — communities of interest and communities of place. This planned program area primarily refers to communities of space or place — neighborhoods, cities and towns, counties, and economic regions. Just as other program areas have their own units of analysis - the individual, the family, the farm - this planned program area has its own unit of analysis - the community.

University faculty and staff focusing in this area have the goal of making a direct impact at the community level or in organizations within the community. This planned program area often involves public issues where collective decisions are made—in contrast to the private decisions made by individuals, families, and firms. Examples include educational programming targeted to local government officials, neighborhood associations and groups, and nongovernmental organizations.

7. Assumptions made for the Program

The concepts of community development, economic development, and economic growth are important to this planned program area. While related to one another, each of these concepts is quite different and is not viewed as synonymously in the planning and implementation of this planned program area. Economic growth refers to the entire economic pie getting bigger but is silent on the critical issue of who gets the various pieces of the pie. Economic development concerns itself with how the benefits of economic growth are being distributed. The concept of community development recognizes that there is more to a community than just its economy or economic base.

8. Ultimate goal(s) of this Program

Improve the capacity of communities to identify and address critical issues that impact the lives of its citizens.
Create more sustainable, competitive local economic development systems.
Foster the development of organizations with representatives who build their community leadership skills and become more actively involved in community problem-solving.

9. Scope of Program

- In-State Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	4.0	0.0	2.0	0.0
2008	4.0	0.0	2.0	0.0
2009	4.0	0.0	2.0	0.0
2010	4.0	0.0	2.0	0.0
2011	4.0	0.0	2.0	0.0

Outputs for the Program

13. Activity (What will be done?)

Workshops
Extension publications

Research
Website Development
IP Video Programs
One-on-One Consultation
Collaboration with other agencies

14. Type(s) of methods will be used to reach direct and indirect contacts

Extension	
Direct Method	**Indirect Methods**
• Education Class • Workshop • Group Discussion • One-on-One Intervention	• Newsletters • Web sites

15. Description of targeted audience

Local elected officials
Staff and volunteers of nonprofits/NGOs
General Citizens

16. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	10000	50000	5000	25000
2008	10500	55000	5500	30000
2009	11000	60000	6000	35000
2010	11500	65000	6500	40000
2011	12000	70000	7000	45000

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	0
2011	0

18. Output measures

Output Text

number of workshops conducted

2007 Target: 12
2008 Target: 12
2009 Target: 12
2010 Target: 12
2011 Target: 12

Output Text

number of research projects

2007 Target: 3
2008 Target: 3
2009 Target: 3
2010 Target: 3
2011 Target: 3

Output Text

number of publications

2007 Target: 6
2008 Target: 6
2009 Target: 6
2010 Target: 6
2011 Target: 6

Output Text

number of collaborations with other agencies

2007 Target: 20
2008 Target: 20
2009 Target: 20
2010 Target: 20
2011 Target: 20

Output Text

number of IP-video programs

2007 Target: 4
2008 Target: 4
2009 Target: 4
2010 Target: 4
2011 Target: 4

Output Text

number of one-on-one consultations

2007 Target: 36
2008 Target: 36
2009 Target: 36
2010 Target: 36
2011 Target: 36

Output Text

number of web sites developed

2007 Target: 2
2008 Target: 3
2009 Target: 3
2010 Target: 4
2011 Target: 4

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Number of communities that increase knowledge of how to identify and address critical issues for citizens

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increased number of communities engaged in issue identification and action planning

Outcome Type: Medium

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Number of communities who improve their capacity to identify and address critical issues that impact the lives of its citizens

Outcome Type: Long

2007 Target: 10
2008 Target: 12
2009 Target: 15
2010 Target: 20
2011 Target: 30

Outcome Text

Number of communities increasing knowledge related to creating sustainable and competitive local economic development systems

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

Increased number of communities creating more sustainable and competitive local economic development systems.

Outcome Type: Medium

2007 Target: 10
2008 Target: 12
2009 Target: 15
2010 Target: 20
2011 Target: 30

Outcome Text

number of participants who are building their community leadership skills and becoming more active in community problem-solving.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcome Text

number of participants becoming more active in community problem-solving efforts

Outcome Type: Medium

2007 Target: 2000
2008 Target: 2200
2009 Target: 2400
2010 Target: 2600
2011 Target: 2800

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

Description

All of these external factors can impact community and economic development work. They will not likely change projected numbers but rather the content of programming. Adverse circumstances can actually increase participation as communities look for resources to assist them to deal with these factors

21. Evaluation studies planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Case Study

Description

{NO DATA ENTERED}

22. Data Collection Methods

- Sampling
- Whole population
- Mail
- On-Site
- Case Study
- Other

Description

{NO DATA ENTERED}