

# Agricultural and Natural Resources Strategic Plan

June 14, 2007

## Agricultural and Natural Resources Priorities:

Agriculture and Natural Resources (ANR) Extension faculty, field specialists, and staff provide catalytic and educational leadership, build partnerships, and provide research-based learning opportunities to help Iowans prosper and to improve quality of life in Iowa. The following objectives have been established to guide this plan from 2007 to 2011.

## Education: Relevant Agricultural and Natural Resources Objectives

► **Objective 1:** Increase corn and soybean producers' and technical service providers' use of research-based crop management practices.

Strategies:	Measures & Anticipated Outcomes	Person (s) Responsible	Due Date		
Provide a broad range of educational opportunities to targeted audiences	<ul style="list-style-type: none"> <li>• 100 applied-research experiments and demonstrations at ISU research farms, grower fields, agribusiness partner locations focused on crop and pest management practices</li> <li>• 10,000 producers and technical service providers attending corn and soybean programs on improving agronomic practices</li> </ul>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <u>Ag &amp; Biosystems</u>                      Mark Hanna  <u>Agronomy</u>                      Lori Abendroth                      Mahdi Al-Kaisi                      Steve Barnhart                      Roger Elmore                      Bob Hartzler                      Antonio Mallarino                      Mike Owen                      Palle Pedersen                      Brent Pringnitz                      John Sawyer                      Margaret Smith                      Elwynn Taylor  <u>Entomology</u>                      Marlin Rice                      Jon Tollefson                 </td> <td style="width: 50%; vertical-align: top;"> <u>Plant Pathology</u>                      Alison Robertson                      Greg Tylka  <u>Field Specialists</u>                      Mark Carlton                      George Cummins                      Joel DeJong                      Jim Fawcett                      John Holmes                      Kyle Jensen                      John Kennicker                      Brian Lang                      Mark Licht                      Paul Kassel                      Clarke McGrath                      Virgil Schmitt  <u>CEED</u>                      Gene Mohling                 </td> </tr> </table>	<u>Ag &amp; Biosystems</u> Mark Hanna <u>Agronomy</u> Lori Abendroth Mahdi Al-Kaisi Steve Barnhart Roger Elmore Bob Hartzler Antonio Mallarino Mike Owen Palle Pedersen Brent Pringnitz John Sawyer Margaret Smith Elwynn Taylor <u>Entomology</u> Marlin Rice Jon Tollefson	<u>Plant Pathology</u> Alison Robertson Greg Tylka <u>Field Specialists</u> Mark Carlton George Cummins Joel DeJong Jim Fawcett John Holmes Kyle Jensen John Kennicker Brian Lang Mark Licht Paul Kassel Clarke McGrath Virgil Schmitt <u>CEED</u> Gene Mohling	03-01-08
<u>Ag &amp; Biosystems</u> Mark Hanna <u>Agronomy</u> Lori Abendroth Mahdi Al-Kaisi Steve Barnhart Roger Elmore Bob Hartzler Antonio Mallarino Mike Owen Palle Pedersen Brent Pringnitz John Sawyer Margaret Smith Elwynn Taylor <u>Entomology</u> Marlin Rice Jon Tollefson	<u>Plant Pathology</u> Alison Robertson Greg Tylka <u>Field Specialists</u> Mark Carlton George Cummins Joel DeJong Jim Fawcett John Holmes Kyle Jensen John Kennicker Brian Lang Mark Licht Paul Kassel Clarke McGrath Virgil Schmitt <u>CEED</u> Gene Mohling				

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▶ **Objective 2:** Assist livestock producers in transitioning feeding programs to take advantage of the opportunities and economies associated with feeding co-products generated from the bio-fuels industry.

<p>Promote research-based solutions to increase production efficiency</p>	<ul style="list-style-type: none"> <li>• 5 applied research and demonstration projects on feeding DGS to reduce cost of gain and extend forage resources</li> </ul>	<p><u>Animal Science</u>            Dan Loy  <u>Economics</u>            John Lawrence  <u>Field Specialists</u>            Darrell Busby            Dennis DeWitt            Beth Doran            Russ Euken            Byron Leu            Denise Schwab            Joe Sellers</p>	<p>03-01-08</p>
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▶ **Objective 3:** Increase crop producers' efficiency of manure and crop nutrient utilization while minimizing surface run-off and preserving ground water quality.

<p>Share research results to enhance nutrient utilization on cropland acres.</p>	<ul style="list-style-type: none"> <li>• 4 research projects completed to identify strategies to improve water quality and the application of these strategies</li> </ul>	<p><u>Ag &amp; Biosystems</u>            Robert Burns            Matt Helmers  <u>Agronomy</u>            Mahdi Al-Kaisi  <u>Sociology</u>            Lois Wright Morton  <u>Field Specialists</u>            Kapil Arora            Greg Brenneman            Kris Kohl            Shawn Shouse  <u>CEED</u>            Jerry Chizek</p>	<p>03-01-08</p>
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► **Objective 4:** Increase the use of Integrated Pest Management practices on public and commercial properties, private residences, landscapes and communities by ag producers and managers, homeowners and consumers through new delivery technologies.

<p>Actively promote use of new technology for program &amp; information access</p>	<ul style="list-style-type: none"> <li>• 1,000 clients who participate in horticulture programs on production methods covering Best Management Practices and Integrated Pest Management practices</li> <li>• 20 percent of new consumer horticulture clients assisted through pod-casting, web casts, websites, web accessible publications</li> </ul>	<p><u>Entomology</u>                  Donald Lewis  <u>Horticulture</u>                  Kathleen Delate                  Paul Domoto                  Cindy Haynes                  Jeff Iles                  Richard Jauron                  Dave Minner                  James Romer                  Hank Taber                  Ann Marie Vanderzanden  <u>Field Specialists</u>                  Eldon Everhart                  Patrick O'Malley                  Mike White  <u>CEEDs</u>                  Bob Dodds                  Deb Van Arkel</p>	<p>03-01-08</p>
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► **Objective 5:** Increase the understanding of Iowans regarding the importance of natural resources management and sustainability.

<p>Expand research-based knowledge to improve economic returns</p>	<ul style="list-style-type: none"> <li>• 2 research projects completed to evaluate the economic impact of management of natural resources</li> <li>• 3 research projects completed to identify site-specific strategies to improve air quality and the application of these strategies</li> </ul>	<p><u>Ag &amp; Biosystems</u>                  Robert Burns                  Tom Glanville                  Mark Hanna                  Matt Helmers                  Jay Harmon  <u>Sociology</u>                  Lois Wright Morton  <u>Field Specialists</u>                  Kapil Arora                  Greg Brenneman                  Kris Kohl                  Shawn Shouse</p>	<p>03-01-08</p>
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### Programs: Relevant Agricultural and Natural Resources Objectives

► **Objective 1:** Educate producers and landowners regarding the benefits of adopting diagnostic tools and best management practices for nutrient application and maintaining soil quality.

<p>Focus educational efforts on best management practices to targeted audiences</p>	<ul style="list-style-type: none"> <li>• 10,400 producers and technical service providers who participate in programs designed to increase the adoption of conservation systems and Integrated Pest Management practices on Iowa's corn and soybean acreage</li> <li>• 1,200 landowners who increase their understanding of water quality issues and related adverse consequences following poor stewardship practices</li> </ul>	<p><u>Ag &amp; Biosystems</u> Tom Glanville Mark Hanna Matt Helmers <u>Agronomy</u> Mahdi Al-Kaisi Roger Elmore Antonio Mallarino Mike Owen Palle Pedersen John Sawyer <u>Entomology</u> Carol Pilcher Matt O'Neal Marlin Rice Jon Tollefson <u>Plant Pathology</u> Daren Mueller Rich Pope</p>	<p>Alison Robertson Greg Tylka <u>Sociology</u> Lois Wright Morton <u>Field Specialists</u> Mark Carlton George Cummins Joel DeJong Jim Fawcett John Holmes Kyle Jensen John Kennicker Brian Lang Mark Licht Paul Kassel Clarke McGrath Virgil Schmitt <u>CEED</u> Jerry Chizek</p>	<p>03-01-08</p>
<p>Develop competency in applying diagnostic tools to manage crop inputs</p>	<ul style="list-style-type: none"> <li>• 1,000 producers and technical service providers trained to use diagnostic related to crop nutrient management</li> <li>• 2,500 farmers and technical service providers trained in managing the nitrogen and phosphorus content of animal manure relative to the appropriate cropping system</li> </ul>	<p><u>Ag &amp; Biosystems</u> Robert Burns <u>Agronomy</u> Mahdi Al-Kaisi Antonio Mallarino <u>Field Specialists</u> Mark Carlton George Cummins Joel DeJong Jim Fawcett</p>	<p>John Holmes Kyle Jensen John Kennicker Brian Lang Mark Licht Paul Kassel Clarke McGrath Virgil Schmitt</p>	<p>03-01-08</p>

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► **Objective 2:** Assist crop and livestock producers' work with agricultural lenders to increase the profitability of production operations, and improve environmental stewardship and social sustainability, while controlling risks consistent with their financial resources.

<p>Provide educational opportunities to targeted audiences to increase awareness and gain knowledge</p>	<ul style="list-style-type: none"> <li>• 100 landowners and producers attending programs that focus on applying best management practices to land coming out of the Conservation Reserve Program</li> <li>• 1,000 income tax practitioners that increase the accuracy and efficiency of the farm returns that they prepare</li> </ul>	<p><u>Agronomy</u> Mahdi Al-Kaisi Steve Barnhart <u>Field Specialists</u> Mark Carlton George Cummins Joel DeJong Jim Fawcett John Holmes Kyle Jensen</p>	<p>John Kennicker Brian Lang Mark Licht Paul Kassel Clarke McGrath Virgil Schmitt <u>Ag Education &amp; Studies</u> Roger McEowen</p>	<p>03-01-08</p>
<p>Develop competency in adopting practices that result in a stronger competitive position</p>	<ul style="list-style-type: none"> <li>• 20 percent of dairy producers who adopt more competitive dairy production systems and practices</li> <li>• 30 percent of niche market pork producers with accurate cost of production records</li> </ul>	<p><u>Animal Science</u> Lee Kilmer Leo Timms <u>Field Specialists</u> Chris Mondak Robert Tigner Dale Thoreson Larry Tranel <u>CEED</u> Al Grigg <u>Animal Science</u> John Mabry</p>	<p><u>Leopold Center</u> Rich Pirog <u>Field Specialists</u> Russ Euken Larry McMullen Tom Miller Terry Steinhart Dave Stender Mark Storlie Jerry Weiss</p>	<p>03-01-08</p>
<p>Evaluate level of understanding gained from exposure to new practices or concepts</p>	<ul style="list-style-type: none"> <li>• 20 percent of Iowa producers who adopt integrated dairy herd and health management practices that result in improved profitability and improved environmental stewardship</li> </ul>	<p><u>Animal Science</u> Lee Kilmer Leo Timms <u>CVM</u> Nolan Hartwig <u>Field Specialists</u> Chris Mondak Dale Thoreson Larry Tranel</p>		<p>03-01-08</p>

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<p>Introduce new skill set to targeted audiences</p>	<ul style="list-style-type: none"> <li>• 10 percent of producers who will increase their awareness and use of interpersonal and organizational skills when managing family or non-family personnel</li> <li>• 20 percent of livestock producers using manure testing information to manage manure application</li> <li>• 800 livestock producers who participate in environmental management system training sessions</li> </ul>	<p><u>Field Specialists</u> Chris Mondak Dale Thoreson Robert Tigner Larry Tranel Greg Brenneman Dennis DeWitt Russ Euken</p>	<p>Kris Kohl Larry McMullen Tom Miller Terry Steinhart Dave Stender Mark Storlie Jerry Weiss</p>	<p>03-01-08</p>
<p>Serve as a catalyst in informed decision-making among targeted audiences</p>	<ul style="list-style-type: none"> <li>• 500 crop and livestock producers who choose marketing, insurance and USDA program alternatives that are consistent with the risk bearing ability of their businesses and their personal preferences for managing risk</li> <li>• 100 female crop and livestock producers and farm partners who take a more active role in decision-making</li> <li>• 100 agricultural lenders who finance the acquisition of new resources or implementation of new technology for their borrowers while maintaining liquidity and controlling financial risks</li> </ul>	<p><u>Ag Education &amp; Studies</u> Roger McEowen <u>Economics</u> David Baker John Baker Mike Duffy William Edwards Shane Ellis Roger Ginder Ann Holste Bob Jolly John Lawrence Darnell Smith Robert Wisner</p>	<p><u>Field Specialists</u> Craig Chase Tim Eggers Don Hofstrand Ron Hook Jim Jensen Steve Johnson Kelvin Leibold Tom Olsen Robert Tigner Bob Wells <u>CEED</u> Pat Derdzinski</p>	<p>03-01-08</p>
<p>Actively promote use of new technology for program and information access</p>	<ul style="list-style-type: none"> <li>• 20 percent of feedlots with more than 100 head that use solid manure settling structures or alternative technology treatment systems</li> <li>• 10 percent of livestock producers who utilize technologies to improve enterprise efficiency</li> </ul>	<p><u>Ag &amp; Biosystems</u> Robert Burns <u>Agronomy</u> Steve Barnhart <u>Animal Science</u> Dan Loy Dan Morrical Daryl Strohbehm <u>Economics</u> William Edwards John Lawrence</p>	<p><u>Field Specialists</u> Darrell Busby Dennis DeWitt Beth Doran Russ Euken Byron Leu Denise Schwab Joe Sellers <u>CEEDs</u> Jack Van Laar Neil Wubben</p>	<p>03-01-08</p>

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Instill a sense of resource stewardship among Iowans	<ul style="list-style-type: none"> <li>• 400 producers who participate in programming directly focused on increasing the number of livestock production sites that adopt practices that reduce impacts to air resources</li> <li>• 500 Iowans who increase their understanding of the importance of adopting energy conservation practices</li> </ul>	<u>Ag &amp; Biosystems</u> Robert Burns Mark Hanna Jay Harmon <u>Field Specialists</u> Kapil Arora	Greg Brenneman Kris Kohl Shawn Shouse <u>CEED</u> Jerry Chizek	03-01-08
Actively promote participation in food security measures	<ul style="list-style-type: none"> <li>• 2,500 pork production premises registered in the national animal ID program</li> </ul>	<u>Animal Science</u> Thomas Baas Anna Butters-Johnson John Mabry Ken Stalder <u>CVM</u> Jim McKean Alex Ramirez <u>Field Specialists</u> Dennis DeWitt	Russ Euken Larry McMullen Tom Miller Terry Steinhart Dave Stender Mark Storlie Jerry Weiss <u>CEED</u> Darwin Miller	03-01-08
Partner with state and federal agencies to provide education to ensure regulatory compliance	<ul style="list-style-type: none"> <li>• 26,830 commercial and private pesticide applicators certified or re-certified annually</li> <li>• 3,000 manure applicators certified or re-certified annually to ensure that producers and agribusinesses meet state and federal regulatory requirements, resulting in enhanced protection of Iowa's soil, water and air quality</li> </ul>	<u>Agronomy</u> Rachel Klein Angie Rieck-Hinz <u>Entomology</u> Carol Pilcher <u>Field Specialists</u> Mark Carlton George Cummins Joel DeJong Jim Fawcett John Holmes Kyle Jensen	John Kennicker Brian Lang Mark Licht Paul Kassel Clarke McGrath Virgil Schmitt Mike White Kapil Arora Greg Brenneman Kris Kohl Shawn Shouse	03-01-08

► **Objective 3:** Minimize surface run-off of manure and crop nutrients to preserve ground water.

Develop competency in nutrient utilization on crop acres	<ul style="list-style-type: none"> <li>• 400 producers increasing the efficiency of manure and crop nutrient utilization while minimizing surface run-off and preserving ground water and air quality</li> <li>• 500 producers and landowners participating in programs directly focused on adoption of practices that reduce nitrate export from subsurface drainage</li> </ul>	<u>Ag &amp; Biosystems</u> Matt Helmers <u>Agronomy</u> Mahdi Al-Kaisi John Rodecap <u>Field Specialists</u> Kapil Arora	Greg Brenneman Joel DeJong John Holmes Paul Kassel Kris Kohl Shawn Shouse	03-01-08
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### Economic Impact: Relevant Agricultural and Natural Resources Objectives

► **Objective 1:** Assist crop and livestock producers, technical service providers, and industry leaders to prepare for and transition to the emerging bioeconomy, while increasing producer and entrepreneur involvement in the number of alternative or value-retained business opportunities that are emerging.

<p>Seek new market segments/applications for ag products</p>	<ul style="list-style-type: none"> <li>• 2,000 producers, technical service providers, and industry leaders who attend programs become aware of new crop opportunities appropriate for bio-energy production</li> <li>• 300 producers and entrepreneurs who increase their knowledge of alternative enterprises or value-retained opportunities by either attending an educational program or downloading educational materials from a website</li> </ul>	<p><u>Ag &amp; Biosystems</u>            Charlie Hurburgh  <u>Agronomy</u>            Lori Abendroth            Steve Barnhart            Roger Elmore            Brent Pringnitz  <u>Field Specialists</u>            Mark Carlton            George Cummins            Joel DeJong            Jim Fawcett            John Holmes            Kyle Jensen            John Kennicker            Brian Lang            Mark Licht            Paul Kassel            Clarke McGrath            Virgil Schmitt</p>	<p><u>Economics</u>            Mike Duffy            William Edwards            Roger Ginder  <u>Value Added Ag</u>            Ray Hanson            Reg Clause            Connie Hardy  <u>Field Specialists</u>            Craig Chase            Tim Eggers            Don Hofstrand            Ron Hook            Jim Jensen            Steve Johnson            Kelvin Leibold            Tom Olsen            Robert Tigner            Bob Wells</p>	<p>03-01-08</p>
<p>Serve as a catalyst in educated decision-making among targeted audiences</p>	<ul style="list-style-type: none"> <li>• 50 new enterprises assisted</li> </ul>	<p><u>Ag Education &amp; Studies</u>            Roger McEowen  <u>Economics</u>            David Baker            John Baker            Mike Duffy            John Lawrence  <u>Value Added Ag</u>            Ray Hanson            Reg Clause            Craig Tordsen</p>	<p><u>Field Specialists</u>            Craig Chase            Tim Eggers            Don Hofstrand            Ron Hook            Jim Jensen            Steve Johnson            Kelvin Leibold            Tom Olsen            Robert Tigner            Bob Wells</p>	<p>03-01-08</p>



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► **Objective 2:** Increase livestock producers' use of farm business planning, establish new sustainable livestock operations, and provide knowledge, educational opportunities, and problem-solving expertise for intergenerational transfers.

<p>Serve as a catalyst to promote economic growth in ag sector</p>	<ul style="list-style-type: none"> <li>• 8 new dairy farms established</li> <li>• 25 new pork producers</li> </ul>	<p><u>Value Added Ag</u>                  Ray Hanson                  Reg Clause                  Craig Tordsen  <u>Field Specialists</u>                  Ron Hook                  Kris Kohl                  Chris Mondak                  Barb Sauser (4-H/Youth, NE)                  Robert Tigner                  Dale Thoreson                  Larry Tranel                  Dennis DeWitt</p>	<p>Russ Euken                  Kris Kohl                  Kelvin Leibold                  Larry McMullen                  Tom Miller                  Terry Steinhart                  Dave Stender                  Mark Storlie                  Jerry Weiss  <u>CEEDs</u>                  Al Grigg                  Darwin Miller</p>	<p>03-01-08</p>
<p>Build &amp; strengthen relationships among ag producer families</p>	<ul style="list-style-type: none"> <li>• 10 intergenerational transfers</li> </ul>	<p><u>Economics</u>                  David Baker                  John Baker                  Mike Duffy  <u>Field Specialists</u>                  Craig Chase                  Tim Eggers                  Don Hofstrand</p>	<p>Ron Hook                  Jim Jensen                  Steve Johnson                  Kelvin Leibold                  Tom Olsen                  Robert Tigner                  Bob Wells</p>	<p>03-01-08</p>

► **Objective 3:** Grow existing and new horticulture businesses by increasing overall value of marketable products, efficient use of production inputs with limited environmental contamination, while assisting Iowans on improving urban and rural landscapes as places to live through sustainable horticultural practices.

<p>Develop competency in applying business management practices</p>	<ul style="list-style-type: none"> <li>• 5 existing horticulture businesses that expand production</li> <li>• 5 new horticulture businesses established</li> </ul>	<p><u>Entomology</u>                  Donald Lewis  <u>Horticulture</u>                  Kathleen Delate                  Paul Domoto                  Cindy Haynes                  Jeff Iles                  Dave Minner                  Hank Taber                  Ann Marie Vanderzanden</p>	<p><u>Value Added Ag</u>                  Craig Tordsen  <u>Field Specialists</u>                  Eldon Everhart                  Patrick O'Malley                  Mike White</p>	<p>03-01-08</p>
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<p>Build &amp; strengthen relationships through agency and community action</p>	<ul style="list-style-type: none"> <li>• 80,000 hours of Master Gardener volunteer work in communities</li> <li>• 10 communities taking action to develop their agricultural economic base</li> <li>• 25 percent of farmers markets in Iowa cooperating with Iowa Department of Agriculture and Land Stewardship on the Women, Infant, and Children (WIC) food stamp program</li> </ul>	<p><u>Entomology</u> Donald Lewis</p> <p><u>Horticulture</u> Kathleen Delate Paul Domoto Cindy Haynes Jeff Iles Richard Jauron Dave Minner James Romer Hank Taber Ann Marie Vanderzanden</p>	<p><u>Value Added Ag</u> Ray Hanson Reg Clause Craig Tordsen Connie Hardy</p> <p><u>CEEDs</u> Bob Dodds Deb Van Arkel</p>	<p>03-01-08</p>
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### Iowa Life: Relevant Agricultural and Natural Resources Objectives

► **Objective 1:** Develop a communications plan for the ANR Extension program area to market ANR Extension leadership role in fostering educational, economic and healthy life-style opportunities for Iowans.

<p>Leverage ability to effectively communicate with a consistent message</p>	<ul style="list-style-type: none"> <li>• 300 press releases, radio PSAs, and specialists interviews</li> <li>• 10 percent increase of Iowans participating in ANR educational programs</li> </ul>	<p>Gerald Miller Paul Brown Jean McGuire John Dungan Sherry Hoyer Laura Miller Christa Hartsook</p>	<p>03-01-08</p>
<p>Position ANR Extension to illustrate the effectiveness of program strategies</p>	<ul style="list-style-type: none"> <li>• 20 impact statements generated from success stories and shared with internal and external stakeholders</li> </ul>	<p>Gerald Miller Paul Brown Sorrel Brown</p>	<p>03-01-08</p>

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## University Life: Relevant Agricultural and Natural Resources Objectives

► **Objective 1:** Involve College of Agriculture student services staff in providing information and training on student recruitment twice each year via Breeze to the entire organization and during ANR professional development on campus.

Leverage state-wide accessibility to ISU educational prospects through outreach efforts	<ul style="list-style-type: none"> <li>• 5 percent growth of students enrolled in Colleges of Agriculture and Veterinary Medicine</li> </ul>	Gerald Miller Paul Brown	03-01-08
Develop activities that promote awareness of ISU educational options	<ul style="list-style-type: none"> <li>• 250 4-H Conference participants who engage in thought-provoking learning activities on campus</li> <li>• At least 10 activities that stimulate youth interest in attending ISU</li> </ul>	Gerald Miller Paul Brown	03-01-08