Strategic Priorities

Institute of Agriculture and Natural Resources

Priority Goal 1: Redefine the College of Agricultural Sciences and Natural Resources to capture its breadth and diversity of academic programs and to ensure student success in the 21st century.

Relation to Core Values:

This priority supports the UNL core values of preparing students for life through learner centered education, commitment to an uncompromising pursuit of excellence and creating a University culture that values diversity of ideas and people.

Internal Actions:

Based on results of market research in progress, determine whether or not to change the CASNR name and, if so, implement an integrated repositioning strategy

Change the curriculum, develop new degrees and new programs:

- Develop a Hospitality, Restaurant and Tourism Management

- Develop five year B.S. to M.S. degree programs

- Pursue joint educational program for Veterinary Medicine with Iowa State University

- Expand the 2+2 degree programs with the Nebraska College of Technical Agriculture and community colleges

- Extend educational opportunities through concurrent credit offerings to high schools

- Enhance four-state collaborative programs in food safety, grassland studies, precision agriculture and community development with University of Missouri, Iowa State University and Kansas State University

Increase the number of undergraduate and graduate students enrolled in CASNR degree programs

- Reinvigorating recruitment and retention programs

- Identifing and clearly articulate the unique programmatic aspects associated with CASNR programs Promoting CASNR's unique small-college feel within a large university

- Enhancing classrooms, teaching labs, equipment and campus aesthetics

- Elevating the roles of research and extension centers and NCTA in student recruitment

- Instilling a single campus philosophy by ensuring that East Campus is a part of every campus visit/tour for all prospective students

- Expanding Career Service interactions with academic partners and potential employers

- Increase the number of student scholarships and internship opportunities through

- Engaging alumni

- Interacting with stakeholders

- Expanding philanthropic contributions

Timeline: 2005-2008

Development and implementation of successful new programs like the professional golf management program is ongoing. Discussions of the College name change have begun. Good faith negotiations for a cooperative contract to enact a joint educational program with Iowa State are commencing in 2005. A new development officer with the NU Foundation is starting in 2005.

Partners:

CASNR alumni, NU Foundation, CEHS, CBA, CAS, NCTA, Nebraska community colleges, high school counselors and administrators, Cooperative Extension Division, Agricultural Research Division, ,Kansas State University, Iowa State University, University of Missouri

Measures of Success:

Increased enrollments in most majors. Stabilized enrollments in some majors. Increased scholarships and internship opportunities. New programs and specializations.

Priority Goal 2: Develop an integrated multi-disciplinary, multi-functional water resources program addressing Nebraska's needs that provides statewide, national and international leadership in water quality and quantity management in the next decade.

Relation to Core Values:

This priority relates to a commitment to an uncompromising pursuit of excellence, stimulates research and creative work that fosters discovery, pushes frontiers and advances society, establishes research and creative work as the foundation for teaching and engagement, and engages with academic, business and civic communities throughout the state and the world.

Internal Actions:

Conduct research and deliver extension education programs that will enable Nebraska agricultural water users to use water in ways that maximize water use efficiency and profitability, protect water quality, and meet regulatory requirements. Key elements of this effort include:

- Developing an improved understanding of basic plant, water, soil, and climate relationships.

- Evaluation of alternative water delivery systems including sprinkler irrigation technologies and sub-surface drip irrigation systems.

- Evaluation of alternative irrigation water management strategies for all irrigation system types and particularly for situations where deficit irrigation is necessary.

- Development of adapted crop varieties, using either conventional breeding programs or genetic modification, that are more drought tolerant, perform well in deficit irrigation situations, or require less evapotranspiration for profitable production.

- Evaluate alternative crops that require less applied irrigation water or are adapted to non-irrigated production, that will fit into Nebraska cropping systems, and for which a market exists.

- Evaluate opportunities for shifting from irrigated to non-irrigated production or other enterprises that will maintain economic viability and sustainability for producers and communities.

- Development decision-making support systems that enable producers, policy makers, financial institutions, and others to make critical decisions regarding crop production and water resources use.

- Enhance research and extension education programs that will increase the scientific knowledge base and public understanding of the occurrence, movement, and quality of ground water; factors that impact the quantity and quality of surface water, the interrelationships between ground water and surface water; and the ecology of Nebraska's ground water and surface water systems.

- Develop research and extension education programs that analyze the water resource and economic impacts of existing or proposed public policies such as USDA conservation programs and EPA water quality regulations.

- Enhance research and extension education programs that enable Nebraskans to protect ground water and surface water quality and respond to regulatory requirements.

- Enhance research and extension education programs that will enable communities and individuals to better understand and use appropriate technologies to protect the quality of drinking water supplies and to remove contaminants when drinking water standards are exceeded.

Water supply and water quality can both be limiting factors that impact the life and economic well-being of Nebraskans. This can lead to conflict among water users and others. Research-based information from IANR programs will be provided for individuals, groups, and decision makers that will enable informed decisions relative to use of limited water supplies and protection of water quality. Decision makers can include local and state elected officials as well as individuals and organizations that represent recreational uses of water, environmental advocacy groups, public water suppliers/municipalities, agricultural producers, etc.

Timeline: 2005-2008

Water related research and education programs are ongoing. An integrated plan to develop a comprehensive water management program will be developed in 2005.

Partners:

Natural Resource Districts, Nebraska Department of Environmental Quality, Irrigation Districts, public power entities, municipalities, U.S. Corps of Engineers, U.S. Bureau of Land Management, U.S. Environmental Protection Agency, Ground Water Foundation, College of Engineering and technology, UNL water Initiative, College of Arts and Sciences, College of Education and Human Sciences, College of Law

Measures of Success:

Number of agricultural producers who change irrigation practices. Reductions in the average amount of irrigation water applied to crops. Reduced levels of contaminants in ground water. Better public policy decisions.

Priority Goal 3: Enhance rural economic opportunity and community revitalization efforts to create more opportunities for future generations, improve the quality of life and to attract talented and educated people to build their lives in Nebraska.

Relation to Core Values:

This priority supports a commitment to uncompromising pursuit of excellence, stimulates research and creative work that fosters discovery, pushes frontiers and advances society, establishes research and creative work as the foundation for teaching and engagement, prepares students for life through learner-centered education, engages with academic, business and civic communities throughout the state and the world, and creates a University culture that values diversity of ideas and people.

Internal Actions:

Provide a perspective for communities to prosper in a regional environment Develop and deliver educational programs targeted to helping community leaders identify their roles within a regional economic system

Assist regions in identifying assets and how to best build upon those assets to build a stronger regional economy

Identify processes that will encourage regional networking opportunities

Assist communities in the application of technology to grow regional economies

Work with communities to identify and develop niche opportunities using assets from the communities in the area

Fully implement the community development minor in CASNR

Assist transitioning community businesses through the usage of Bizfind and other appropriate mechanisms

Assist communities who must network to maintain an infrastructure to support an aging population

Enhance entrepreneurship in Rural Nebraska

Develop and fully implement the 4-H youth entrepreneurship curriculum

Expand student internship opportunities with new and emerging enterprises in rural Nebraska
Enhance entrepreneurial programs associated with the Food Processing Center and the Industrial Ag Products Center

Integrate entrepreneurial focus in the CASNR undergraduate curriculum

Encourage faculty entrepreneurship by supporting faculty spin-off businesses

Deliver educational opportunities through distance-delivered programs

Provide technical expertise for businesses through joint participation in Small Business Innovative Research grant programs

Teach entrepreneurs to explore global markets

Develop the leadership potential of Nebraskans

Provide educational programs for community leaders through programs like the Leadership Plenty curriculum

Deliver educational programs for elected and appointed officials through the Nebraska Association of County

Officials, the Nebraska Association of County Extension Boards and for Natural Resource District personnel

Encourage value-added and new enterprise development

Develop research-based educational programs on agro-tourism and eco-tourism

Facilitate development and education to enable economic opportunities for niche markets in community-based food systems, specialty foods, new generation cooperatives, alternative livestock production methods and viticulture/winery production and marketing

Increase research and education on bio-based energy production through ethanol, bio-diesel, biomass and other uses of renewable energy sources

Enhance research and development of textiles and other products from renewable and recyclable resources

Improve the quality of life for Nebraskans

Provide skills through the 4-H youth development program to make youth successful in the 21st century work force

Expand research and education programs to help make families successful in the work place and in the community

Conduct research and deliver educational programs on obesity issues in Nebraska

Provide educational programs for youth and adults on financial literacy Expand educational programs on life skills development for limited resource families across Nebraska

Enhance wellness for all Nebraskans through research-based educational programs

Research and educational programs focused on the impact of an aging population base in rural Nebraska and ways of managing the impact

Timeline: 2005-2008

Enhancing rural economic opportunities will be an ongoing programming thrust from 2005-2008. Youth development curriculum 2006, entrepreneurship development will be an ongoing program, leadership development programs have been initiated in 2005, value-added and new enterprise development programs will be expanded in 2006-2008

Partners:

Nebraska Department of Economic Development, Nebraska Department of Agriculture, RC & D's, Nebraska Department of Labor, Nebraska Department of Insurance, Nebraska Health and Human Services System, Nebraska Business Development Center at UNO, University of Nebraska Rural Initiative, local economic planners, Lied Main Street Program, USDA Rural Development, NACO, College of Education and Human Sciences, College of Business Administration, College of Architecture

Measures of Success:

Communities with capacity to grow will do so, elected officials will report they have better information and skills for decision making, Youth will be more employable and make informed career choices,

reduced medical costs, community leaders will work together within a concept of regional cooperation

Priority Goal 4: Enhance research and scholarship to create new knowledge that addresses priority needs of Nebraskans and all people.

Relation to Core Values:

This priority supports a commitment to uncompromising pursuit of excellence, stimulates research and creative work that fosters discovery, pushes frontiers and advances society, establishes research and creative work as the foundation for teaching and engagement and creates a University that values diversity of ideas and people.

Internal Actions:

- Faculty will become more grant competitive at the national level through focus on skill development

- New knowledge from research and creative work will be integrated in teaching and extension education programs for the benefit of Nebraskans

- All IANR faculty will be engaged in scholarly or creative activities

- New faculty hires will be focused in areas that address Nebraska's needs; either applied research that benefits Nebraska or basic research that is grant-competitive at the national level

- Faculty will be encouraged to develop and protect intellectual property

- A renewed emphasis will be placed on multi-state, multi-disciplinary and multi- functional programs that are team driven

- Increased emphasis will be placed on accomplishment reporting to enhance UNL's image at the national level

Timeline: 2005-2008

Research and creative work is an ongoing expectation within IANR, thus it will encompass the entire timeline.

Partners:

National Science Foundation, National Institutes of Health, U.S. Department of Agriculture, College of Arts and Sciences, College of Education and Human Sciences, College of Engineering and Technology, private and public funding organizations

Measures of Success:

Increase number of patents, increase in grant numbers and dollar amounts awarded, increase in number of publications, Nebraskans will report that research and creative activities are highly valued.

Priority Goal 5: Strengthen food security, food safety and nutrition programs to ensure that all Nebraskans have a secure and nutritious food supply that enhances wellness.

Relation to Core Values:

This priority supports a commitment to uncompromising pursuit of excellence, stimulates research and creative work that fosters discovery, pushes frontiers and advances society, establishes research and creative work as the foundation for teaching and engagement and creates a University that values diversity of ideas and people.

Internal Actions:

Add new programs on bioterrorism and biosecurity issues

Develop techniques to protect crops and livestock from production through processing and distribution systems

Deliver educational programs to all potential stakeholders

Enhance the diagnostic networks for crops and livestock diseases

Investigate creation of a Doctor of Plant Health degree

Pursue collaborative programs with Iowa State University and joint program in veterinary medicine education

Enhance food safety research and education programs

Expand research on pre-harvest measures to protect against pathogens in plants and animals
Build research and education programs with processors of agricultural products

Deliver educational programs for food service providers and purveyors

Increase basic research on the biology of pathogens

Increase nutritional quality of foods

Support development of a nutritional genomics center and conduct basic research on bioactive compounds that enhance well being

Expand basic breeding programs to alter constituents in plants and animal products that make them more desirable and healthy

Increase research on lipid of metabolism in humans to lower LDL and overall cholesterol through dietary changes and nutriceuticals

Enhance research and education for individuals to move them from theory to practice in making healthy and culturally relevant food choices

Conduct basic research on food components as they relate to the incidence of cancer, heart disease, diabetes, obesity and allergies

Timeline: 2005-2008

Much of this work will span the 2005-2008 time horizon. Educational programs will begin in 2005; the Doctor of Plant Health decision will be made in 2005-2006.

Partners:

University of Nebraska Medical Center, Kansas State University, Iowa State University, Nebraska Department of Agriculture, Nebraska Department of Health and Human Services, National Science Foundation, National Institutes of Health, U.S. Department of Agriculture, College of Arts and Sciences, College of Education and Human Sciences, youth-serving organizations, non-profit organizations, schools, Nebraska Restaurant Association, hospitals and other health care providers

Measures of Success:

Reduction of food pathogen-induced illness, contributions to a reduction in obesity and cholesterol rates in Nebraska citizens, new products developed, business spin-offs, patents, and amount of grantfunding