Compact for the College of Agricultural, Food & Environmental Sciences
FY2003-04

A. Introduction
The College will continue to pursue our new vision and priorities that were initiated in fiscal year 2001-02 and outlined in our previous Compact.

This is a College of 11 disciplinary departments, one division, six Research and Outreach Centers, 230 faculty members, 440 graduate students, 1,071 undergraduate students, 180 professional staff members, 400 support staff members – which translates into 21 budgeted areas. The College’s research and outreach missions are supported in part by the Minnesota Agricultural Experiment Station and the University of Minnesota Extension Service. The majority of faculty members and many support staff members have joint appointments with the Experiment Station and Extension. Reflecting its land grant partnership roots, the College’s mission of teaching, research, and outreach is supported on a recurring basis by University Operations and Maintenance funds, state funds via the legislative “state special” and federal formula funds, as well as grants and gifts.

The College has implemented five broad priorities that are bound by an overarching priority theme of emphasizing exemplary education, which includes the teaching of undergraduate and graduate students, outreach in its many forms and life long learning. The priorities are: Promoting safe and healthy foods, Improving environmental quality, Enhancing agricultural systems, Revitalizing Minnesota’s rural communities and Serving urban communities. More important, this successful process has brought us forward to the implementation and action phase – work that continues and expands.

The compact between the Executive Vice President and Provost and the Dean of the College of Agricultural, Food and Environmental Sciences for 2003-04 includes the following:

B. Update-Major Long-Term Goals/Priorities from Previous Compacts

Overall Progress and Outcomes -College Priorities:

A Priority Process Steering Committee was established in May 2000 to oversee the development of the College priorities though a process involving faculty, students, staff and citizens. The steering committee has continued to work with faculty groups and others to develop the initiatives and goals for each identified priority. The Steering Committee makes recommendations to the Dean for initiative funding.

A total of nine initiatives, developed by teams of faculty, students and staff, have been funded through compact money that was matched by the College -- a $150,000 recurring allocation from the Provost’s office and $150,000 recurring from college resources (mainly reallocation). A total of $600,000 has been invested in priority initiatives, $100,000 in 2001-02 and $500,000 in 2002-03. A total of $200,000 will be invested in 2003-04. The new priority initiative in student learning communities, for example, is offering new models for enhancing student experiences and retention through cohort scheduling and major seminar. Another initiative focuses on nutrient cycling, which has implications for water quality, climate change and biodiversity, and has already attracted national attention.

The goals and priorities described under headings A through F are supported by the activities in the departments and Research and Outreach Centers. These goals were described in greater detail in the fiscal year 2001-02 Compact Appendix. The following also includes a summary of progress and outcomes to date.

1. Exemplary Education:

a) Vision. To be nationally and internationally recognized for exemplary research-based undergraduate and graduate education and outreach in its many forms that promotes professional competence in agricultural, food and environmental sciences and a sense of social responsibility.

The College is committed to serving the needs of the citizens of Minnesota through research-based graduate and undergraduate education, outreach and the College’s integrated relationship with the University of Minnesota Extension Service. Education based on research is what makes the College unique and distinguishes it from other higher education institutions in Minnesota.

Outcomes and Progress:

i. Building Student Learning Communities
During 2002-03, the Building Student Learning Communities and Building Faculty Communities of Teaching initiatives were integrated into one major initiative, Student Learning Communities (SLC). To date, eight of the 12 major program areas in COAFES are represented in this combined initiative. To further integrate and sustain this effort, the Student Learning Communities initiative is directed by a subcommittee of the College Curriculum Committee. Beginning fall 2003, COAFES will begin a pilot program whereby students in eight majors will enroll in up to three “courses in common,” which are in turn coupled with special First Year Integrating Seminars that will reinforce cross-disciplinary connections among the courses and the students’ prior experiences.

The SLC Program, and particularly the integrating seminars, will also provide key support to these students in two additional areas: (1) creating a "sense of belonging" in the College; and (2) assisting decision-making processes regarding choice of major or career direction, as well as other curricular and extra-curricular matters. Thus, the concept of building student learning communities continues to be central to the courses in common and associated first-year seminars and provides much-needed structure and guidance to first-year students to help them more fully utilize the resources and programs within COAFES and the University at large.

The faculty development component has included identifying seminar instructors for fall 2003 and providing training on curricular design, fostering community, pedagogical considerations and evaluation/assessment throughout the pilot program. We are receiving guidance on this effort from the Center for Teaching and Learning. During June 2003, we hosted the North Central Teaching Symposium (regional symposium for NASULGC) on the theme of Student Learning Communities. Over 100 people attended, more than a third from COAFES. This 2-day workshop coupled with subsequent meetings held during the summer provided significant “time on task” to prepare specific plans, sample course syllabi, etc. for the development of first year integrating seminars.

The student assessment component has included a survey of first-year students that was conducted in summer 2003 during New Student Orientation. A total of 221 surveys were returned, representing all of the incoming first-year students in COAFES this fall. The purpose of this survey was to assess incoming students’ educational expectations, educational intent and perceptions of the College, as well as the importance they assign to developing a “sense of community”. Key findings included the following:

- 67% of incoming student said that there should be a strong emphasis on creating a “sense of belonging” in the college;
- 67% of the survey respondents said that the college should give strong emphasis on helping them establish academic and social support networks;
- 71% of the respondents indicated that there should be a strong emphasis on developing stronger relationships with faculty and staff;
- 63% said that it is extremely important that they participate actively in class;
- 77% indicated that it is extremely important for them to receive regular feedback from faculty about how they are doing in their courses;
- 72% indicated that it is extremely important that they discuss career plans and opportunities with faculty; and
- 74% indicated that it is extremely important that they graduate in four years.

During fall 2003, surveys have been distributed to all students participating in student learning communities, and focus groups with participating students, faculty, and staff, and have been held. Surveys also were distributed to faculty representatives of each major program to determine viability of student learning communities for their programs. These measures will yield written evaluations as well as interview commentary on how to strengthen the usefulness of integrating seminars; collaborative learning activities; interdisciplinary connections among courses; administrative details and smoothness of operation; and feedback on improving the student learning communities. Summative evaluation will consist of instructor evaluation of student performance in first year integrating seminars as well as student evaluations of their ongoing freshman experience.

Reports have been shared monthly with the College Curriculum Committee as well as more broadly within the College governance structure and with the University's Council of Undergraduate Deans as appropriate.

ii. Additional Instructional Initiatives to Improve Quality

Curriculum Revision

A number of COAFES undergraduate programs are currently under curriculum revision to improve quality and relevance of the programs while also working to increase the quality of incoming students and improve retention and graduation. Moreover, these changes provide for clear communities of learning
for COAFES undergraduates while also meeting existing and emerging market needs for our graduates. In the coming months, COAFES will be forwarding proposals to the EVPP for the following:

- Combining components of the Science in Agriculture and Animal Production Systems majors into one Animal Science major; (completed: approved by the Regents, September 2003).
- Combining components of the Science in Agriculture and Crop, Soil, and Pest Management programs, and developing tracks in plant genetics and biotechnology, plant processing and products, and sustainable plant production as part of a new Applied Plant Sciences major; (underway; collaboration includes representatives from seven departments in COAGES and Plant Biology in CBS; target date to the EVPP Office, February 2004).
- Revising the Environmental Science major to further emphasize basic and applied science in areas including environmental monitoring and analysis, environmental management, land and atmospheric science, and land and water science; (completed: approved by EVPP Office, September 2003).
- Revising the Agricultural Industries and Marketing major to include additional emphasis on Food Industries and to move the Animal Industries emphasis to the new Animal science major; (completed: approved by EVPP Office, September 2003).
- Requiring students in the International Agriculture minor to have an international experience; (completed: approved by the EVPP Office, October 2003) and
- Revising the Environmental Horticulture major to include an additional area of emphasis in collaboration with CALA. This shared area of emphasis will be called Landscape Design, (target date to the EVPP Office, November, 2003).

In addition, in August 2003, COAFES and Southwest Minnesota State University decided to phase out our three partnership program – Agricultural Industries and Marketing; crop, Soil and Pest Management; and Scientific and Technical Communication – and to work out a schedule for current students pursuant with the initial agreement between the Board of Regents of the University of Minnesota and Southwest State Minnesota University.

During the course of the 2003 spring semester, it became clear that the budgets of both institutions were going to be severely reduced for the foreseeable future. In addition, two of the four faculty in the programs had resigned. In light of the low enrollments and high student costs of the programs, finances no longer allowed for filling the open positions or supporting the programs’ expenses.

The parties together are developing a dissolution strategy that will share costs as equitable as possible and transition the programs in a manner best serving the students. The two institutions also have agreed to engage in targeted cooperation on areas of strategic need. Future partnership efforts will be collaborative and will pursue sound financial principles.

**Admissions/Advising Pilot Project**

The purpose of this two-year pilot project is to provide a local "one stop personal link" for prospective students through their first year in college, with a clear transition to faculty advising. The intent is to increase recruitment, improve retention/graduation, and provide local support for student learning communities in each major. Specifically, we are working to locate an admissions/advising coordinator within each department that houses a major program. The coordinator works to recruit students and then continues to work with students during the first year, meeting jointly with the student and his/her upcoming faculty advisor. To date, 8 of our 12 programs have such a coordinator, and we are already seeing slight gains in retention and graduation figures. Goals include increasing retention and graduation by 5-10% by Fall 2004 and Spring 2005.

**Global Campus - Curriculum integration project**

Here our goal is that all COAFES majors will have completed curriculum integration by the end of the 2003 calendar year. We are on target for completion.

**SEAM (Student Excellence in Academics and Multiculturalism)**

COAFES is partnering with the Central SEAM initiative to offer two to three classes with a common theme and build a learning community that fosters a sense of belonging, values diversity, and promotes academic success. This is on target to begin fall 2003.

**Wireless learning initiative**

We are working to develop exemplary IT teaching environments at significantly less cost than renovating existing out-dated lab environments. Using a combination of college and tech fees, COAFES provides a wireless card and M.S. Office for all COAFES undergraduate and graduate students as well as faculty involved in teaching. To date, 40%+ of undergraduates and
graduates have received both wireless cards and the M.S. Office Suite. Faculty
and students in every program are currently taking advantage of the wireless
environment. Examples of the use of this environment by faculty can be found
at www.coafes.umn.edu/wireless

Career Services Partnership with St. Paul Board of Colleges
COAFES continues to partner to increase access to COAFES Career Services
by co-locating with St.Paul Board of Colleges (197 Coffey). During 2003-04,
we plan to investigate how we might better leverage the career services
provided by all colleges on the St. Paul Campus.

iii. Instructional Funding Changes

Food Science and Nutrition (FScN)
During 2002, Deans Muscoplat (COAFES) and Baugher (CHE) pursued a
series of discussions regarding the gap between funding and expenses that the
two colleges provided to the department of FScN for instructional support. In
the past, COAFES has received 100% of the instructional tuition, and has
received no state support dollars while supporting 14.1 faculty. Although CHE
received state support dollars, it supported fewer faculty (10.2); CHE received
no instructional tuition. In short, when IMG was implemented, a decision was
made that the instructional support would go to CHE and the instructional
tuition would go to COAFES. While this was an equitable split at the
beginning of IMG, both deans have signed a new agreement calling for a more
equitable split of instructional funding.

The relevant parties have agreed to evenly split instructional tuition income.
The instructional tuition income from FScN will be distributed equally to
COAFES and CHE by central administration beginning with 2003-04. A
recurring transfer of state support dollars from CHE to COAFES was
implemented in 2003-04 to offset the redistribution of the instructional tuition
to the two collegiate units. Each college will attribute financial support to the
department following their individual tuition attribution formula. The Deans of
the two colleges will jointly consider funding requests and consult on
allocations to the Department of Food Science and Nutrition.

CHE collected graduate student technology fees from FScN graduate students
in 2002-03 and COAFES did not. It was agreed that CHE will distribute _ of
technology fees collected from Food Science and Nutrition graduate students to
COAFES. COAFES initiated graduate student technology fees beginning fiscal
year 2003-04. The technology fees flow to the graduate academic program
identifier. The two graduate academic programs of FScN are identified with
the CHE. It was agreed that CHE will continue to annually distribute _ of the
technology fees from graduate students to COAFES. The EVPP applauds this
cooperative solution.

Departmental instructional funding compact statements
During fall 2002 an Instructional Funding Advisory Committee developed a set
of instructional funding guidelines. These are being implemented through a
type of compact process in which each department will submit a request and
then meet with the Associate Dean for Undergraduate Instruction for review
and approval. Instructional funding for fiscal year 2003-04 for each department
will be adjusted on an annual basis as part of this compact process. Each
allocation will be adjusted for faculty salaries and fringe and the addition or
subtraction of faculty FTEs. Some departments may receive an increase or
decrease to their allocation. The criteria for determining an increase or
decrease are as follows:

Funding for Undergraduate Instruction
• Productivity and efficiency (SCH per Instructional FTE)
• Increase in SCH
• Course and/or program quality (learning outcomes and assessment, ratings,
reviews, recruitment, retention, student learning communities, etc.)
• Student satisfaction and success (ratings, retention, timely graduation,
placement)
• Strategic department and program initiatives and college priorities
(integration with these)

Funding for Graduate Instruction
• Productivity and efficiency (SCH per Instructional FTE)
• Increase in SCH
• Course and/or program quality (learning outcomes and assessment, ratings,
reviews, recruitment, retention, awards, etc.)
• Student satisfaction and success (ratings, retention, timely graduation,
placement)
• Strategic department and program initiatives and college priorities
(integration with these)

The EVPP encourages this funding mechanism.
b) Partnerships.

i. AFSA (Agriculture and Food Sciences Academy)
COAFES has an ongoing partnership agreement with the Agriculture and Food Sciences Academy (high school).

ii. Partnerships with MnSCU institutions
The College continues to refine its 2+2 partnership programs with the following MnSCU institutions

- Southwest Minnesota State University (see above section on changes during 2003 to the partnership programs at SMSU)
- Rochester (RCTC)
- UM-Crookston
- Central Lakes
- Dakota Co. Tech
- Fond du Lac Tribal
- South Central Tech College
- Ridgewater
- MN West

Outcomes and Progress: As noted in the COAFES' priority statements, maintaining a tradition of excellence in teaching and learning and continuing our commitment to attracting high-quality students into undergraduate and graduate programs is crucial. Quality programs and the opportunities those programs afford for extra-curricular and curricular experiences are important to attract top students from inner city, suburban, and rural areas.

The AFSA partnership has as a key goal that of attracting top students from the inner city and suburban areas. Furthermore, in collaboration with AFSA instructors, COAFES faculty will develop learning modules and workshop experiences that promote experiential learning and that promote relationships with K-12 instructors and institutions.

For fiscal year 2002-03 and fiscal year 2003-04, COAFES received, along with AFSA, a USDA Secondary Education Development Grant. The goals of this grant integrate with the "faculty expertise" partnership area. COAFES faculty and staff from 14 units/programs are meeting to develop, together with AFSA instructors, programming that meets the needs of organizations' faculty, staff, and students.

The College's partnerships with other higher-education institutions help better serve Minnesota citizens. Over the past year COAEFS has positioned the faculty and departments involved with these partnerships to begin the development of "hybrid" courses (part online, part face to face) in support of these partnership programs. We also have repositioned an admissions and advising counselor to work closely with the community and technical college partnerships, fostering relationships with these institutions, finalizing articulation agreements, and enhancing the readiness of these transfer students.

During 2003, our goal is to update all 2+2 agreements (done, approved by Vice provost Craig Swan, Summer 2003), to work with the Greater Service initiative on seamless transfer processes for transfer students (underway), and to complete transfer guides for all metro area community colleges (done). Our overall goal is to attract 120 transfer students and to increase the quality and diversity of these students.

2. Promoting Safe and Healthy Foods:

a) Vision. To foster a healthier population with an improved quality of life by linking the development, production, processing, and distribution of foods that are safe and promote health.

The interrelationships among agriculture, food and human health are obvious, yet extraordinarily complex. They affect all people, rural and urban, local and international alike. Food used to be viewed as simply providing nourishment. Now there is an increasing emphasis on how plant and animal products can significantly affect health. At the same time, people are increasingly concerned about food safety, food production, processing and handling practices.

The College strives to conduct research in a variety of areas, such as:

- Enhancing naturally occurring, beneficial compounds in fresh fruits and vegetables
- Incorporating more vitamins and minerals into crops
- Improving the fatty acid profiles of grains and soybeans to reduce fat and cholesterol
- Developing processing and distribution methods that minimize deterioration of food characteristics en route to consumers
- Assessing international market trends
It will apply the tools of biotechnology and genomics with an emphasis on food safety, environmental safety, ethical approaches and consumer confidence. The College will also explore alternative plant and animal materials as potential sources of health-promoting products, and pursue research that supports the enhanced business management and marketing opportunities for Minnesota food products that will benefit farmers, consumers and the economy.

**Outcomes and Progress:** The Implementation team developed one Initiative for funding.

**Promoting Safe and Healthy Foods Initiative.**

The goal of this initiative “Promoting Safe and Healthy Food” is to reach physicians, health care providers and community leaders and others who inform the public with research information on the role of diet and health. The initiative includes designing integrated curricular, degree and certificate programs in partnership with other organizations.

This initiative will receive $80,000 in funding for fiscal years 2003-2005.

**New Initiative: Funding Request**

The EVPP has committed Compact funding for the General Mills Chair in the Department of Food Science and Nutrition. This will be a joint position with the College of Human Ecology. The commitment is $50,000 nonrecurring bridge funding for two years to each of the colleges.

**b. Molecular and Cellular Biology:**

The Molecular and Cellular Biology goal highlights the interrelationships among the College’s six priorities. In this case, it directly integrates Promoting Safe and Healthy Foods and Enhancing Agricultural Systems.

The College continues to play a central role in enhancing the leadership position of the University of Minnesota in cellular and molecular biology. It joins with the Colleges of Biological Sciences, Veterinary Medicine and other Academic Health Center groups to emphasize interdisciplinary research and teaching to connect science to significant industrial applications across plant, animal and medical fields. Areas of development include bioinformatics, genomics, imaging and proteomics.

COAFES faculty who will occupy research and office space in the Cargill Building are:

- Dr. Ron Phillips, Director, Center for Microbial and Plant Genomics and Professor, Agronomy and Plant genetics. Administrative Office Space [Offices, conference rooms, receptionist space].
  - Ms. Suzanne Livingston, Associate Administrator, Center for Microbial and Plant Genomics. Office space only.
- Dr. Dan O’Sullivan, Associate Professor, Food Science and Nutrition, plus space for two post doctoral scientists and four graduate students and/or technicians.
- Dr. Sue Gibson, Assistant Professor, Plant Biology, plus space for two postdoctoral positions and four graduate students and/or technicians.
- Dr. Nevin Young, Professor, Plant Pathology, plus space for three postdoctoral positions and four graduate students and/or technicians.
- Fumi Katagiri, Assistant Professor, Plant Biology, plus space for three postdoctoral positions and four graduate students and/or technicians.
- Nathan Springer, Assistant Professor, Plant Biology, plus space for one postdoctoral position and one graduate student.
- Dr. Phil Pardey, Professor, Applied Economics. Office space only.

**Indicators of progress:**

- Microbial & Plant Genomics Building – 2003 completion; and series of four National Academy of Sciences lectures in 2002-2003, leading up to the building opening.
- Biotechnology major/ or academic minors. This will be in cooperation with CBS.
- Research grants dollars.
c) Ongoing emphasis: ‘Foods for Health:’

The University of Minnesota’s leadership position on integrating agriculture, food and health is emphasized in the Presidential Initiative “Healthy Foods, Healthy Lives.” The initiative builds upon the May 2002 “Foods for Health” conference, jointly sponsored by the College and the Academic Health Center, the College-sponsored national symposium in February 2003 at the American Association for the Advancement of Science annual meeting, College briefings to members of Congress and staff in April 2003 and the College’s June 2003 “Obesity Workshop,” which was convened at the request of the Under Secretary of the U.S. Department of Agriculture. The college, in conjunction with the colleges of Human Ecology, Public Health, Veterinary Medicine and others, is developing a vision and action agenda for the “Healthy Foods, Health Lives” initiative.

An international conference on whole grains, tentatively scheduled for Summer 2004, will continue to emphasize the College’s strength in interdisciplinary work involving food production, processing, nutrition, and consumer health.

3. Improving Environmental Quality:

a) Vision: To expand the focus on environmental issues related to food production, the natural resource base that sustains and improves that production and the landscape, integrating the importance of water quality, soil quality and air quality.

There is an increasing need for research and education that helps to improve environmental quality. As more people in Minnesota use limited resources, competing uses can often result in social and public policy conflicts.

Agricultural production systems and urban-based activities have many effects on the environment. The College plays a key role in policy discussions by providing research-based information on issues such as:

- Environmental sustainability – working with urban organizations and homeowners as well as farm operations of all sizes to address the impacts of horticultural and agricultural production on air, water, soil and other natural resources.
- Risks, costs and benefits – assessing the implications of various production technologies and their impact on both the environment and the food chain.
- Water issues – encouraging water management and water quality in urban and rural watersheds and addressing runoff and erosion control.
- Global climate change – exploring the impact of food production systems on greenhouse gas emissions, the storage of carbon in the ecosystem as organic matter and the reduction of nitrogen usage.

Outcomes and Progress: The Implementation team developed one Initiative for funding.

Nutrient Cycling in Minnesota Cropping and Livestock Systems.

This proposal will receive $67,000 in funding for 2003-2005.

The goal of this initiative, “Nutrient Cycling in Minnesota Cropping and Livestock Systems,” is to identify the agronomic, economic and environmental impacts of various nutrient management strategies by gaining a better understanding of nutrient cycling in alternative and conventional production systems and the impact of proposed solutions to real and perceived problems. Progress towards these goals will require building a Working Group, and a Research and Extension Implementation Team. Effectiveness of results from both research and extension will be evaluated through discussions with key stakeholders and impact and number of publications.

b) Agricultural, Food and Environmental Ethics Program

The Agricultural, Food and Environmental Ethics Program goal highlights the interrelationships among the College’s six priorities. In this case, it directly integrates Promoting safe and healthy food, Improving environmental quality, Enhancing agricultural systems, Revitalizing Minnesota’s rural communities and Serving urban communities.

The rapid growth in agricultural technology and changes in the rural landscape require a stronger academic presence to generate knowledge and offer public information and education. Pursuit of questions regarding consumer attitudes, values, religious beliefs, ethics, regulatory issues and public policy in a public forum are a component of the leadership this College must offer to citizens and scientists alike. The Executive Vice President and Provost committed $50,000 recurring to this program beginning in fiscal year 2001-02.

Indicators of progress:
- Center developed
- Research grant dollars
Outcomes and Progress:

A Center of Agricultural, Food, and Environmental Ethics is currently being developed. Dr. Dan Philippon has been appointed as Program Director. An Advisory committee has been appointed to help in the development of the Center.

The proposed mission of the Center will be: To offer educational programs and courses, conduct original interdisciplinary research, and foster public discussion and debate about the ethics of agricultural research, production, and distribution; food consumption; and the human relationship to the nonhuman environment. The Program is intercollegiate and interdisciplinary and welcomes a range of perspectives and values that reflect the concerns and interests of its audience. There is currently 65 undergraduate and graduate courses in COAFES that contain content that addresses agricultural, food and environmental ethics, either in whole or in part.

The Program in Agricultural, Food, and Environmental Ethics is a member of the Consortium on Law and Values in Health, Environment & the Life Sciences.

Additional information on the advisory committee and activities of the Program can be found on the website: [http://www.agricola.umn.edu/ethics/](http://www.agricola.umn.edu/ethics/)

4. Enhancing Agricultural Systems

a) Vision. To be a leader in education and research on systems that will produce, process and distribute plant and animal products in an economically, environmentally and socially sustainable manner.

Today’s agricultural and horticultural production results from combinations of large and small producers, full-time and part-time producers, traditional, organic and non-traditional producers, and commercial and hobby producers. Unique agricultural and horticultural production systems are ideally profitable and sustainable. For some time, the trend has been toward either diversifying to fill niche markets, or increasing the size of the farming operation to capitalize on economies of scale. The challenge is to develop agricultural production systems that produce wholesome food and fiber products that the market demands at competitive prices, while preserving a healthy environment for future generations.

The College serves producers, processors and citizens by emphasizing research and education about systems that will be economically, environmentally and socially sustainable. The College enhances its focus on basic and applied research activities in the following areas, to name but a few:

- Integration of diversified crops into Minnesota’s farming systems
- Environmental quality and impact
- Human health and safety
- Production systems, business structures, planning and marketing
- Global comparative production systems

Outcomes and Progress: The Implementation team developed one Initiative for funding.

Integrating Minnesota’s Food Systems:

This proposal will receive $80,000 in funding from 2003-05.

The goal of this initiative “Integrating Minnesota’s Food Systems” is to develop an active program of cooperation and participation among key faculty from across the College to support:

- Functional communication links among departments.
- Establishment of a cooperative approach to designing an undergraduate honors initiative or freshman experience focusing on integrated food systems.
- Identification of appropriate interdisciplinary research initiatives.
- Development and organization of a seminar/symposium program.
- Solicitation of applications from students and faculty for research support.
5. Revitalizing Minnesota’s Rural Communities

a) Vision. To work innovatively with rural communities to help them retain and build their vitality.

Rural Minnesota faces many demographic, social, political, technological and economic changes. With change comes the challenge of maintaining an engaged society, addressing the out-migration of youth, providing for aging citizens, supporting new immigrants and reconciling views on land uses.

A vital community is socially, environmentally and economically active and healthy. To achieve this vitality, a community must have adequate resources to meet the needs of both the people and the rural landscape. The College emphasizes a systems approach as it helps to address the circumstances of people and their environments. This means emphasizing the interrelationships among people, natural resources and the economy. The College’s six Research and Outreach Centers are key mechanisms that share interactive research, education and outreach with citizens and communities across the state. They are:

- North Central Research and Outreach Center at Grand Rapids
- Northwest Research and Outreach Center at Crookston
- UMore Park at Rosemount
- Southern Research and Outreach Center at Waseca
- Southwest Research and Outreach Center at Lamberton
- West Central Research and Outreach Center at Morris

Outcomes and Progress: The Implementation team developed two Initiatives for funding.

a. Funding for COAFES Students to Work on Local Food Systems Issues.

This initiative will receive $87,000 in funding for 2003-05

The goal of the “Local Food Systems Initiative” is to provide funding for internships and assistantships for COAFES students who would like to work with communities on local food systems issues.

b. K-12 Food System Education.

This initiative received a $150,000 grant from the Bremer Foundation for support for fiscal year 2002-2005.

The goal of the “K-12 Food Systems Education Initiative” is to promote and support the inclusion of the understanding of the food system in the professional opportunities offered by the University to K-12 educators. This initiative will receive $150,000 in funding for 2003-05.

b) Expanding Rural Entrepreneurship. The College, through its Department of Applied Economics, is proposing the new Center for the Study of the Minnesota Economy, which will provide economic data and analysis to support efforts to position Minnesota for economic success in the 21st century by providing professional, unbiased and credible information on the economy.

The Center’s research program will focus on statewide and regional aggregates, on the sources of statewide growth and on identifying how changes in major forces such as productivity, capital investment, labor quality and demographics will affect state economic growth. In addition, the Business Retention and Expansion program, applied research and Extension program will initiate new activities in the next 12 months. The program helps community leaders understand the concerns of their local businesses and the ways the community can assist them in becoming more productive.

Indicators of progress:

♦ Creation of the Center of the Study of the Minnesota Economy.
♦ Continuing enhancement of Regional Sustainable Partnership networks.

6. Serving Urban Communities:

a) Vision. To focus agricultural, food and environmental expertise on issues concerning urban communities and environments and strengthen efforts to meet urban needs.

Urban communities, small towns and Minnesota’s main streets face issues relating to environmental quality, management of recreational and aesthetic landscapes and land use decisions.

Working together, faculty from across the university, governmental representatives, consumers and industry groups can address essential urban issues. The College seeks to focus research, teaching and outreach programs on land use planning, water quality, landscape design and landscape management in urban settings.
Expanded urban outreach programs will provide urban citizens and urban industries such as food processing, vegetable production, nursery, turf, floriculture and landscaping with research-based information.

The Minnesota Landscape Arboretum, within the Department of Horticultural Science, is a key research and outreach component of the College’s urban focus. The Arboretum features 1,000 acres of unique gardens open to the public, in addition to conducting horticultural research and offering educational opportunities.

**Outcomes and Progress:** The Implementation team developed two initiatives for funding:

a. Clean Water and Urban Runoff, and  
b. Learning Habitats for Schools

As part of one of the few land grant universities in an urban area, the College is uniquely positioned to be a leader in addressing environmental concerns caused by urban growth. Using the University of Minnesota Outreach, Research and Education (UMORE) Park and the Arboretum as a research and outreach site, the initiative will develop programming to position the College as a center of excellence to solve environmental problems related to urban development. A May 2003 national conference will identify research needs and potential funding sources.

Obtaining input from stakeholders and potential financial supporters of urban stormwater programs has been an important activity of COAFES. As an example, Dr. Wilson (BAE) has given at least ten presentations to different audiences of possible stormwater research at UMore Park. However, the greatest input was obtained from a workshop held on May 1 and 2, 2003. The workshop consisted of presentations from national and local speakers and small group discussions. Our goal was to identify the research and educational needs related to urban runoff and to establish initiatives for addressing them. There was good discussion among the eighty-six invited participants in developing these initiatives. The initiatives from the workshop and other information are summarized at the website of: www.bae.umn.edu/stormwater/.

Based on the input of stakeholders, the Stormwater Team has identified three viable approaches for an urban runoff program at the University of Minnesota. They are:

1. Develop programs at UMore Park to study and communicate the effectiveness of BMPs by controlling experimental (independent) variables with artificial runoff or rainfall events. These programs would use the wastewater from the Empire Sewage Treatment Plant.
2. Develop experimental neighborhoods at UMore Park that include innovative BMPs that can be tested under natural meteorological (including precipitation) conditions. Freedom to implement and study alternative BMPs would be an inherent feature of these neighborhood designs.
3. Develop an urban runoff program using BMPs within existing or developing neighborhoods. This type of program would require that the University of Minnesota work closely with a consortium of cities, watershed districts, state agencies and other interested groups in the selection of neighborhoods. These studies would not necessarily be done at UMore Park.

The approach(es) taken by the Stormwater Team will be determined by external funding. Approaches that are able to garner support will move forward and those that do not will be eliminated.

In addition to establishing an overarching vision for a stormwater program, COAFES is actively involved in ongoing research and outreach programs. For example, Drs. Wilson and Nieber (BAE) have four externally supported projects related to the design of urban runoff systems. Two of these projects are funded by Mn/DOT, one project is funded by MPCA and the fourth project is supported by a multi-state USDA grant. Controlling sediment from construction activity is an important stormwater issue. COAFES is working cooperatively with Mn/DOT on a certification program for erosion control. This program is self-supporting, using fees generated from training workshops. Approximately 1500 people attended the training workshops last year.

The “Learning Habitats: Models for Neighborhood Schools” will conduct research and education projects in neighborhoods to create model learning landscapes. This initiative entails the design, installation, and maintenance of models for schoolyard habitat plantings to be used for teaching science and environmental education at urban schools. The initiative also includes teacher training, urban teen learning and work experiences, and development of resource materials for educators and others.

This initiative will receive $156,000 for 2003-05.
b) Partnerships:
- Continue the role of the Center for Rural Design
- Develop research and engagement of programming UMore Park in Rosemount

The college will contribute $300,000 on a recurring basis toward these partnerships.

7. Outreach

The College is committed to continuing its strong emphasis on outreach to the citizens of Minnesota. While all faculty in the College are expected to contribute to outreach programs throughout the year, which is evaluated in their annual performance review, the backbone of the outreach effort in the College is through the relationship with the University of Minnesota Extension Service. In addition, the College also provides outreach and civic engagement through its interdisciplinary centers, departmental programs, Minnesota Landscape Arboretum, and through the College's six Research and Outreach Centers located in Crookston, Grand Rapids, Lamberton, Morris, Rosemount and Waseca.

The College is meeting the stated needs of Minnesota residents by providing outreach programs based on the research work within the College. This includes the issues of food production and safety, biotechnology, yard and garden, community development, and environmental quality. Almost one-half of the faculty have a formal Extension appointment and this provides a thorough complement of research-based programs that are conducted throughout the state involving all disciplines in the College.

Current outreach priorities in the College revolve around: a) safe and bountiful food production systems, b) technology-enhanced agricultural production systems; and c) environmentally-friendly gardens and “greenspace.” Virtually 75% of the College’s faculty will be directly or indirectly involved with these priority outreach efforts. The majority of the outreach efforts conducted by the College are enhanced and/or supported by external constituents, from state regulatory agencies to state commodity groups to local advocacy groups. Partnering with these constituents provides a stronger outreach voice and creates numerous logistical efficiencies and increases impact effectiveness. Outreach programs gain efficiencies via the statewide Extension infrastructure that provides an education dissemination system using regional and local personnel and offices.

Performance measures for the outreach efforts of the College will be evaluated with a combination of indicators. A relatively new, and integral, indicator will be revenue generation. The College is endorsing a business model that will relate the value of our outreach programs with revenue generation. All of our outreach programs must be financially accountable based on the value each program provides, thus, seeking revenue via educational grants, registration fees, and/or sponsorships will make our programs combine aspects of both the knowledge and business model. Program evaluations, which are expected with all of our major outreach programs, will provide indicators as to the impact of the information being delivered. Applied research grants—both number and quantity—indicate a level of success for the College’s outreach effort as virtually all applied research authorizers insist on outreach components in the project.

Indicators of progress:
- Number of programs.
- Program evaluation of all major Outreach programs.
- Applied research grants.
- Revenue generation from outreach programs.
- Development of a College-wide business model for revenue generation from outreach programs.

A report on the evaluation of all major outreach programs will be submitted to the Executive Vice President and Provost by July 1, 2004.

8. Diversity

The College of Agricultural, Food and Environmental Sciences is committed to promoting the principles of equal opportunity, affirmative action, and multiculturalism where all individuals are valued, respected, and unobstructed in their pursuit of excellence. Our goal is to create a workplace and classroom environment that embraces diversity and is free of intolerance. Multiculturalism promotes an understanding that the human experience includes, but is not limited to, age, culture, ethnicity, gender, sexual orientation, disabled status, race, or religion.

The College is dedicated to broadening our diversity goals, which include the following efforts:
• Continue to monitor and build on our affirmative action goals with respect to faculty and staff hires. New ways of recruiting through networking and a variety of minority and women’s publications continue to afford new opportunities in this area. Our goal is to make steady progress in diversifying our faculty and staff to bring us closer to the representation that is proportional to that of Minnesota’s increasingly diverse population.

• Continue to provide leadership within the University community to support programs such as “A Working Respect” which explored topics of gender, power, equality and diversity.

• Expand opportunity for University faculty and staff to participate in diversity and disability workshops.

• Initiate a diversity recruitment plan with our new urban partner, the Agricultural Food and Sciences Academy, to support and encourage enrollment of underrepresented groups into the new high school.

• Initiate a diversity requirement plan as part of our overall work in attracting higher quality transfer students.

As a part of our existing commitment to sustain and encourage cultural diversity and biodiversity leading to the long-term resiliency of human communities and ecosystems, the College emphasizes recruiting and retaining undergraduate and graduate students, as well as faculty from culturally diverse ethnic backgrounds, consistent with its overarching priority: Emphasizing Exemplary Education.

The College sponsors several programs that support students from culturally diverse ethnic minorities, including:

• Diversity and Food Systems Scholars’ Program -- a scholarship program for undergraduate students
• Minorities in Agriculture, Natural Resources and Related Sciences – an extracurricular student organization
• Minnesota Agricultural Student Trainee Program – an exchange program bringing students from diverse international locales for multi-week learning opportunities and experiences

• Off-campus study programs – faculty-led study abroad experiences that afford students the opportunity to learn about diverse cultures in a variety of international contexts
• Woodlands Wisdom Confederation – an undergraduate joint degree program that offers baccalaureate degrees in food science, dietetics and nutrition using American Indian culturally-based curriculum. The joint degree program is affiliated with the College, partner colleges within the University of Minnesota and six tribal colleges in the region.

In addition, the College offers the Undergraduate Honors Program featuring courses that provide curricular opportunities to learn more about diverse cultural approaches and traditions. Specific courses have included "Native American Environmental Perspectives," "The Migrant Farm Worker Experience" and "Foods as Medicine."

The College also sponsors programs that provide unique outreach opportunities to diverse communities. They include:

• Pathways to Educational Partnerships -- This statewide, culturally specific community gardening program works with reservation-based Native American communities to establish multiple gardening sites, build horticultural capacities, and restore the physical health of American Indians in Minnesota.
• Native American Research and Outreach Center -- a new partnership between the White Earth Tribal College and the College that is designed to establish a model center for indigenous inquiry and learning focusing on water issues in the region.
• Office of International Programs -- implements programs and creates partnerships that address agricultural, food and environmental sciences issues internationally and enjoys partnerships with countries from China to Russia to Senegal.
• New Immigrant Farmers Program -- Based at the Rosemount Research and Outreach Center, this successful program provides land, tools and gardening advice to new immigrants from traditionally agricultural cultures (Somalia, Southeast Asia, East Africa and others).

Indicators of progress:
♦ Develop a support system of students of color within the College.
♦ Increased diversity of incoming students:
Increased diversity of Faculty and Staff.

9. Biology Programs

a) Molecular and Cellular Biology:
The College continues to play a central role in enhancing the leadership position of the University of Minnesota in cellular and molecular biology, a Presidential academic initiative. It joins with the Colleges of Biological Sciences, Veterinary Medicine and other Academic Health Center groups to emphasize interdisciplinary research and teaching to connect science to significant industrial applications across plant, animal and medical fields. Areas of development include bioinformatics, genomics, imaging and proteomics.

Indicators of progress:
♦ Microbial & Plant Genomics Bldg – 2003 completion.
♦ Biotechnology major/ or academic minors.
♦ Research grants dollars.

b) Plant Biology:
Consistent with the University’s commitment to Cellular and Molecular Genetics, COAFES and the College of Biological Sciences has formed a new fully shared Department of Plant Biology. Faculty FTS’s and budgets are being split between the two colleges, which will co-administer all programs. Reconfiguration of this department is occurring through (a) a management of selected current CBS faculty lines to COAFES, and (b) a reassignment of selected COAFES lines into the department.

Minnesota Agricultural Experiment Station funding has been redirected to the department by both Colleges on a recurring basis. Both Colleges have also provided additional funding for graduate student assistantships to the department.

Indicators of progress:
♦ Joint faculty positions (current faculty)
♦ Joint hiring of new faculty
♦ Graduate student number
♦ ICR generation

C. New Long-Term Goals/Priorities
No new long-term goals/priorities submitted at this time.

D. Enrollment Management
The plan first defines enrollment management and its elements, provides an overview of enrollment goals for each major, and outlines the enrollment management strategies for each COAFES major.

1. Definition of Enrollment Management:

Enrollment management is the process of defining enrollment goals and establishing procedures to reach these goals, thereby providing UMN and COAFES with the mechanisms to control its size, shape, and character. Enrollment management can be defined as a process, or an activity, that influences the size, the shape, and the characteristics of a student body by directing a unit’s efforts in marketing, recruitment, and admissions as well as pricing and financial aid, its research agenda, orientation, retention studies, and student services. It is not simply an administrative process (revised from Enrollment Management: An Integrated Approach by Hossler).

The goal of enrollment management is “to analyze current enrollment information and estimated future trends, articulate college goals related to enrollment, model the budgetary impacts of potential enrollment trends and confidently propose a plan of action related to these factors” (Provost Bruininks’ memo dated Jan. 28, 2002).

2. Elements of Enrollment Management:

Enrollment Management includes the following considerations:

• Current and projected enrollment levels and characteristics (next five years).
• A statement of enrollment goals and the rationale for those goals, including specific goals and strategies for improving retention and graduation rates.
• A demographic scan of recruitment pools, analyzing potential changes in future recruitment opportunities.
• An analysis of external factors (e.g., competition) that will influence recruitment and enrollment of students.
• Current data on student retention and graduation rates.
• Specific unit strategies for improving student retention and graduation rates.
• Proposed changes to University policies that could better enable us to meet our goals and a commitment to discuss such changes in light of their impact on other colleges.

3. Overview of COAFES Enrollment, Retention, and Graduation – Undergraduate Students.

This overview discusses COAFES enrollment goals, retention and graduation rates, strategies for improving these rates, and suggested policy changes.

a. COAFES Undergraduate enrollment:

Current COAFES enrollment figures are as follows:

<table>
<thead>
<tr>
<th>Major</th>
<th>Department</th>
<th>2002</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>An/Pl Sys</td>
<td>Agronomy</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Crop/Soil</td>
<td>Agronomy</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>An ProdSy</td>
<td>Animal Science</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Animal Sci</td>
<td>Animal Science</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sci Agri</td>
<td>Animal Science</td>
<td>245</td>
<td></td>
</tr>
<tr>
<td>Ag Bus Adm</td>
<td>Applied Econ</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ag FD Mgmt</td>
<td>Applied Econ</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Appl Econ</td>
<td>Applied Econ</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td>Pre Ag Bus</td>
<td>Applied Econ</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Premaj AgFd</td>
<td>Applied Econ</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>Pre Ag Ed</td>
<td>APSA</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Pre Bio Sc</td>
<td>APSA</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Undecided</td>
<td>APSA</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Pre BAE</td>
<td>BAE</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Food Sci</td>
<td>FScN</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>FScN</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>Env Hort</td>
<td>Horticulture</td>
<td>105</td>
<td></td>
</tr>
</tbody>
</table>

| Pre-Land Arch          | Horticulture | 25  |
| Sci Tech Comm          | Rhetoric    | 49  |
| Ag In/Mktg             | SWC         | 41  |
| Envir. Science         | SWC         | 80  |

Subtotal: 1,071

Southwest State Enrollment

<table>
<thead>
<tr>
<th>Major</th>
<th>2002</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Industries and Marketing SSU</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Crops/Soils SSU</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Scientific and Tech Comm SSU</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Subtotal: 40

College Total 1,111

COAFES majors would like to increase their enrollment from 1,111 students in 2002-03 to 1400+ students in 2005-06. The increase will come from around 220-250 incoming NHS students and around 150-200 incoming NAS students each year. These increases must be associated with strong academic profile and improving retention and graduation rates.

<table>
<thead>
<tr>
<th>Major</th>
<th>Current</th>
<th>03-04</th>
<th>04-05</th>
<th>05-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAFES Total Students</td>
<td>1111</td>
<td>1200</td>
<td>1300</td>
<td>1400</td>
</tr>
<tr>
<td>Animal Science</td>
<td>296</td>
<td>300</td>
<td>320</td>
<td>340</td>
</tr>
<tr>
<td>Applied Plant Sciences</td>
<td>20</td>
<td>20</td>
<td>35</td>
<td>50</td>
</tr>
<tr>
<td>Applied Econ &amp; AFBM</td>
<td>249</td>
<td>260</td>
<td>275</td>
<td>300</td>
</tr>
<tr>
<td>Food Science &amp; Nutrition (COAFES)</td>
<td>128</td>
<td>135</td>
<td>150</td>
<td>175</td>
</tr>
<tr>
<td>Environmental Horticulture</td>
<td>130</td>
<td>150</td>
<td>175</td>
<td>200</td>
</tr>
<tr>
<td>Environmental Sciences</td>
<td>80</td>
<td>100</td>
<td>120</td>
<td>150</td>
</tr>
<tr>
<td>Ag Industries &amp; Marketing (with SSU)</td>
<td>65</td>
<td>70</td>
<td>75</td>
<td>80</td>
</tr>
</tbody>
</table>
Curricular changes to improve recruitment were noted in another section. To summarize, COAFES plans to do the following:

- Maintain excellence in Animal Science by combining the Science in Agriculture and Animal Production Systems majors into one Animal Science major, continuing to have around 300 students (N=296 for 02-03) in this major;
- Continue its award-winning programs in Applied Economics and Ag, Food, Business Management, resulting in 300 students (N=249 for 02-03) in these majors;
- Propose and offer a new major, Applied Plant Sciences, that will meet research and industry needs in genetics, biotechnology, plant processing and products, and sustainable plant production; here we expect 50 new majors in the next three years;
- Continue its excellent programs in Environmental Horticulture and Environmental Science (N=210 for 02-03), again resulting in around 300 students;
- Increase recruiting in the Food Science major (in conjunction with CHE) and maintain current numbers in the Nutrition major, to result in around 175 students (COAFES) and totaling around 375 with CHE;
- Maintain current numbers of students in Agricultural Industries and Marketing;
- Maintain or slightly increase numbers of students in Scientific and Technical Communication; and
- Maintain or slightly increase current numbers of students pre-major programs (BAE, AFEE).

To achieve our overall goal of 1400 undergraduates by 05-06, COAFES majors will continue to use the following strategies:

- Emphasize recruiting in urban and suburban schools.
- Establish new areas of emphasis in programs to respond to new job markets.
- Mentor and select students from the Agricultural and Food Science Academy.
- Increase the recruitment of students currently employed in relevant industries.
- Develop collaborative programs with secondary and postsecondary schools.
- Increase the number of scholarships, work-study, and summer employment opportunities.
- Continue FFA involvement, Science Fairs, and other such activities.
- Maintain nationally reputed programs.
- Highlight the quality of graduates to industry.
- Market the unique small-campus, small-community atmosphere of the St. Paul campus.
- Study the needs of potential students by means of focus groups and other methods.
- Improve communication of programs, including newsletters and Web sites.
- Designate major-specific support personnel for recruitment purposes.
- Consult with the Vice Provost for Undergraduate Education regarding the impact of this enrollment strategy on the academic resources of other colleges.

b. COAFES Undergraduate Retention Rates:

<table>
<thead>
<tr>
<th>Academic Level</th>
<th>Fall 2001 Enrollment</th>
<th>Continuing In COAFES</th>
<th>Continuing At U of MN</th>
<th>New NHS &amp; NAS</th>
<th>New IUT</th>
<th>Graduated</th>
<th>Dropped</th>
<th>Fall 2002 Enrollment</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior</td>
<td>294</td>
<td>84</td>
<td>27</td>
<td>31</td>
<td>17</td>
<td>142</td>
<td>53</td>
<td>282</td>
<td>-12.0</td>
</tr>
<tr>
<td>Junior</td>
<td>244</td>
<td>158</td>
<td>34</td>
<td>42</td>
<td>39</td>
<td>18</td>
<td>36</td>
<td>247</td>
<td>3.0</td>
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<tr>
<td>Sophomore</td>
<td>235</td>
<td>174</td>
<td>28</td>
<td>55</td>
<td>37</td>
<td>0</td>
<td>33</td>
<td>254</td>
<td>19.0</td>
</tr>
<tr>
<td>Freshmen</td>
<td>302</td>
<td>206</td>
<td>27</td>
<td>217</td>
<td>10</td>
<td>0</td>
<td>68</td>
<td>288</td>
<td>-14.0</td>
</tr>
<tr>
<td>Total</td>
<td>1,075</td>
<td>622</td>
<td>116</td>
<td>345</td>
<td>103</td>
<td>160</td>
<td>190</td>
<td>1,071</td>
<td>-4.0</td>
</tr>
</tbody>
</table>

Continuing in COAFES = The number of students registered for both Fall 2001 and Fall 2002 in the College
Continuing At U of MN = The number of students registered Fall 2001 in COAFES and elsewhere at the U of MN Fall 2002
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New IUT = Number of transfer students from within the U of MN enrolling Fall 2002
Graduated = Students registered Fall 2001 who graduated from COAFES Fall 2001 through Summer 2002
Dropped = Students registered Fall 2001 who did not graduate and who were not registered anywhere at the U of MN Fall 2002

<table>
<thead>
<tr>
<th>Academic Plan</th>
<th>Fall 2001 Enrollment</th>
<th>Continuing In COAFES</th>
<th>Continuing At U of MN</th>
<th>New NHS &amp; New IUT Graduated</th>
<th>Dropped</th>
<th>Fall 2002 Enrollment</th>
<th>Change</th>
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<tbody>
<tr>
<td>Ag Bus Adm</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.0</td>
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<tr>
<td>Ag Ed Mgmt</td>
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<td>6</td>
<td>2</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Ag IndMktp</td>
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<td>0</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>-15.0</td>
</tr>
<tr>
<td>Ani ProdSy</td>
<td>43</td>
<td>30</td>
<td>1</td>
<td>15</td>
<td>2</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Ani Sci</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Ani/PI Sys</td>
<td>15</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>-12.0</td>
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<tr>
<td>Appl Econ</td>
<td>122</td>
<td>58</td>
<td>12</td>
<td>31</td>
<td>33</td>
<td>18</td>
<td>127</td>
</tr>
<tr>
<td>Crop/Soil</td>
<td>22</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Env Hort</td>
<td>91</td>
<td>52</td>
<td>5</td>
<td>38</td>
<td>10</td>
<td>17</td>
<td>105</td>
</tr>
<tr>
<td>Env Sci</td>
<td>78</td>
<td>46</td>
<td>11</td>
<td>27</td>
<td>6</td>
<td>7</td>
<td>15</td>
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<tr>
<td>Ed Sci</td>
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<td>27</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Nutr</td>
<td>87</td>
<td>60</td>
<td>8</td>
<td>29</td>
<td>7</td>
<td>6</td>
<td>14</td>
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<tr>
<td>PreAg Bus</td>
<td>4</td>
<td>4</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PreAg Ed</td>
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<td>29</td>
<td>0</td>
<td>21</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>PreBioSci</td>
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<td>0</td>
<td>0</td>
<td>2</td>
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<td>PreLArch</td>
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<td>16</td>
<td>13</td>
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<td>0</td>
<td>10</td>
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<tr>
<td>PremajAgEd</td>
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<td>47</td>
<td>4</td>
<td>10</td>
<td>18</td>
<td>5</td>
<td>13</td>
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<tr>
<td>PremajBAE</td>
<td>22</td>
<td>9</td>
<td>6</td>
<td>11</td>
<td>2</td>
<td>0</td>
<td>7</td>
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<tr>
<td>Sci Ag</td>
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<td>11</td>
<td>37</td>
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<tr>
<td>Sci/TCom</td>
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<td>9</td>
<td>7</td>
<td>15</td>
<td>9</td>
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<tr>
<td>Undecided</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1,075</td>
<td>622</td>
<td>116</td>
<td>345</td>
<td>103</td>
<td>160</td>
<td>190</td>
</tr>
</tbody>
</table>

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Dropped = Students registered Fall 2001 who did not graduate and who were not registered anywhere at the U of MN Fall 2002

While a large number of new students begin each year in COAFES, we have begun a strong set of strategies to address retention. These include the following:

- Implementing a clear program for first-year students in each major (program), taking advantage of the first-year programs offered through Central administration and developing strong student learning communities (see earlier section);
- Requiring one-on-one meetings/connections/mentoring with every new student and follow-up on the effectiveness of this work; and
- Requiring both college (4-year) planning as well as career planning during the first year.

In addition, we continue to do the following:

- Increase the number of scholarships, work-study, and summer employment opportunities
- Add more faculty and teaching specialists to teach and advise students
- Provide more flexible offerings, such as online courses, weekend or evening courses, more foundation course options to meet students' scheduling needs
- Use more instructional and communications technologies
- Implement learning communities, more small-group work, and other cohort options
- Study the needs of current students by means of focus groups and other methods
- Improve advising (e.g. orientation courses that require plans of study; faculty training)
- Improve communication with students (e.g. undergraduate advising handbook, program planning guides, e-mail reminders to students to meet with their advisors before registering for courses, etc.)
- Improve teaching facilities and methods (e.g. Technology-Enhanced Learning)
- Increase the number of student-directed studies, practicums and internships
c) Proposed changes to University policies

To support these enrollment, retention, and graduation strategies, the following changes to University policies should be discussed in the areas of tuition, resources, incentive and reward structures, and processes:

**Tuition**
- Ensure support for programs that do not offer courses that are required by other majors.
- Give more credit for lab sections than for lectures because lab sections are more expensive and more intensive.

**Resources**
- Provide cutting-edge information technology in classrooms to make high-tech majors credible, improve career placement for students, and allow faculty to enhance learning with technology (note: we are participating as a college in the EVPP’s nextGen Professorate Program, a TEL initiative. Seven pairs of professors/assistant professors are participating.)

**Incentive and reward structures**
- Provide incentives to faculty for recruitment and program promotion.
- Provide incentives to faculty for commitment to advising.
- Provide incentives, resources, and reward structures for faculty interested in developing creative teaching approaches, online courses, and other technology-enhanced courses.

**Processes**
- Increase efforts in industry-specific recruiting.
- Encourage advertising of majors in one college to students in other colleges.
- Create clear policies for faculty developing online learning opportunities.
- Create a graduation clearance system that optimizes graduation processes.

4. Overview of COAFES Enrollment, Retention, and Graduation – Graduate Students.

Currently there are 470 graduate students in COAFES. The college has 12 major graduate programs managed through the Graduate School and one Master of Agriculture program in Horticulture, managed by COAFES.

<table>
<thead>
<tr>
<th>Major</th>
<th>Department</th>
<th>2002</th>
<th>Total</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPL PLSCI***</td>
<td>Agronomy</td>
<td>58</td>
<td>58</td>
<td>13.2%</td>
<td></td>
</tr>
<tr>
<td>PL BIO SCI**</td>
<td>Agronomy</td>
<td>37</td>
<td>37</td>
<td>8.4%</td>
<td></td>
</tr>
<tr>
<td>PLANT BRED</td>
<td>Agronomy</td>
<td>1</td>
<td>1</td>
<td>0.2%</td>
<td>96</td>
</tr>
<tr>
<td>ANIMAL PHY</td>
<td>Animal Science</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANIMAL SCI</td>
<td>Animal Science</td>
<td>29</td>
<td>29</td>
<td>6.6%</td>
<td>30</td>
</tr>
<tr>
<td>AG AP ECON</td>
<td>Applied Econ</td>
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<td>82</td>
<td>18.6%</td>
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</tr>
<tr>
<td>BIOSYS AG EN</td>
<td>BAE</td>
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<td>14</td>
<td>3.2%</td>
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</tr>
<tr>
<td>ENTOMOLOGY</td>
<td>Ento</td>
<td>40</td>
<td>40</td>
<td>9.1%</td>
<td>40</td>
</tr>
<tr>
<td>FOOD SCI*</td>
<td>FScN</td>
<td>29</td>
<td>29</td>
<td>6.6%</td>
<td></td>
</tr>
<tr>
<td>NUTRITION*</td>
<td>FScN</td>
<td>24</td>
<td>24</td>
<td>5.5%</td>
<td>53</td>
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<tr>
<td>HORT</td>
<td>Hort</td>
<td>3</td>
<td>3</td>
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<tr>
<td>PLANT PATH</td>
<td>Plant Pathology</td>
<td>19</td>
<td>19</td>
<td>4.3%</td>
<td>19</td>
</tr>
<tr>
<td>RHET &amp; S &amp; TC</td>
<td>Rhetoric</td>
<td>40</td>
<td>40</td>
<td>9.1%</td>
<td></td>
</tr>
<tr>
<td>S &amp; T COMM</td>
<td>Rhetoric</td>
<td>38</td>
<td>38</td>
<td>8.6%</td>
<td>78</td>
</tr>
<tr>
<td>SOIL SCI</td>
<td>SWC</td>
<td>25</td>
<td>25</td>
<td>5.7%</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>440</td>
<td>440</td>
<td>100.0%</td>
<td>440</td>
</tr>
</tbody>
</table>

Note: The Masters of Agriculture in Horticulture program also has 30 students.

Enrollment projections continue to remain modest across the programs, with most programs planning to maintain current enrollment levels and grow by only a few students per year. Most programs have lost faculty over the past five years, resulting in some cases in less graduate students than in previous years. However, a few programs predict substantial growth over the next five years; these include Agricultural and Applied Economics (20 additional students), Animal Sciences (30), Food Science (40) and Plant Pathology (10). Thus, a major goal would be to return to nearly 550 graduate students by 2007.

A number of programs will work to increase their overall recruiting efforts through securing research grants with graduate student support, recruiting students through strengthening industry affiliations, and accommodating mid-career students. Our graduate stipends are relatively low, and it is clear that this is an impediment in recruiting elite graduate students.
Our primary need for attracting good students continues to be funding.

**COAFES Retention Rates and Goals for graduate students:**

Overall retention and graduate rates in COAFES graduate programs are high (90%+). Programs annually evaluate the degree program status of the graduate students. This is of value for the student, the advisor and for the DGS in evaluating the degree progress. It also ensures the timely completion of degree requirements, ensures that M.S./Ph.D. quality research is being conducted which will meet thesis requirements, and increases the interaction between the student and his/her thesis committee.

Changes in the cost of supporting graduate students, additional TA funding to bring in a pool of students who have flexibility in their choice of research programs, and alternative funding streams for competitive students continue to be identified as needs by all of our graduate programs.

**E. Facilities Issues**

**Facilities improvements currently in the construction/bid phase:**

- a) Phase I of the Plant Growth Facility – St. Paul Campus (completion April 2003)
- b) Microbial and Plant Genomics building – St. Paul Campus (completion May 2003)
- c) Phase I – Visitors Centers Arboretum, site development

The following projects were included in the FY02-03 Capital Request. They were vetoed by Governor.

- a) Farm Shop/Maintenance Building – North Central Research and Outreach Center at Grand Rapids
- b) Remodeling/ITV Expansion – Southern Research and Outreach Center at Waseca
- c) Lab and Office Building – Northwest Research and Outreach Center at Crookston

**F. Financial Issues**

1. The College is currently developing a financial plan to fund new priorities and goals. Options we are considering include:

   - a) Internal reallocations - including an assessment on all funds to “reinvest” in the new priorities.
   - b) Increased revenues from non-public sources such as grants and gifts to invest in the new priorities.
   - c) Increased total Indirect Cost Recovery (ICR) by seeking grants that pay total allowed ICR. This increase in ICR would be invested in the new priorities.
   - d) Increased number of endowed chair faculty positions. Our goal is to have at least one endowed chair per department.
   - e) Redirection grants for faculty that are willing and able to redirect their research/extension/teaching to the new priority areas. The College will provide up to $50,000 in redirection grants in 2003-04.

2. **Tuition** – The agreed upon tuition revenue estimate for the College is $7,900,000 for fiscal year 2003-04.

3. **ICR** – The agreed upon ICR revenue estimate for the College is $1,063,550 (49.5% of $2,148,586) for fiscal year 2003-04.

**G. Compact Development**

In September 1999, when Charles Muscoplat was appointed Vice President and Dean of the College, faculty leaders were discussing the need to identify priorities for the future. They wanted to create guideposts that would (1) support the goals and needs of citizens in the state, and (2) determine ways to make best use of the College's human, financial, and physical resources. In April 2000, the Dean hosted a day-long retreat for the College leadership – Research and Outreach Center and departmental heads -- to support and encourage this effort. By September 2000 the College had draft text on six major theme areas that was discussed and debated during an all-faculty meeting. The Dean has provided staff and financial support to enthusiastically encourage this grassroots effort that has further evolved into an inclusive process of listening to and learning from our students, our staff, our faculty and citizens. In November, staff and students provided their views and goals for the future of the College, and in December over 400 citizens participated in the College’s "listening sessions" at eight locations across the state to describe their
concerns, needs and hopes for the future. This input was used to develop the
fiscal year 2001-02 Compact.

The original Priority Steering Committee and a Faculty Implementation Team
for each of our six priorities continues and has established guidelines for
implementing the initiatives. The fiscal year 2003-04 compact was developed
with input from the steering committee, the implementation teams and
Department and Research and Outreach Heads.

Information on priority activities have been shared with the Civic Engagement
Task Force at all stages as a model for active interactions and partnerships with
citizens and organizations.

H. Data Profile

For a display of planning data related to the College of Agricultural, Food &
Environmental Sciences, refer to a link off the University web site managed by
This site contains standard financial, staffing and student information.

I. Report Summary and Allocation Summary

Proposal for one Animal Science Major  Completed 9/03
Proposal for new Applied Plant Sciences Major  2/04
Revising the Environmental Science Major  Completed 9/03
Revising the Agricultural Industries & Marketing Major  Completed 9/03
Revising the International Agriculture Minor  Completed 10/03
Revising the Environmental Horticulture Major  10/03
Evaluation of Major Outreach Programs  7/04

<table>
<thead>
<tr>
<th>Historical Allocations Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY99 through FY03 Compact Investments</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>FY99-00</th>
<th>FY01</th>
<th>FY02</th>
<th>FY03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rochester/SSU</td>
<td>25,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Davis Position-Applied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Econ</td>
<td>27,300</td>
<td>28,000</td>
<td>21,322</td>
<td>50,000</td>
</tr>
</tbody>
</table>

Central Allocation Summary – FY2003-04

<table>
<thead>
<tr>
<th>FY2004 Amount</th>
<th>Recurring</th>
<th>Nonrecurring</th>
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<tbody>
<tr>
<td>Advising</td>
<td>$10,000</td>
<td></td>
</tr>
<tr>
<td>Bridge Gen. Mills Chair</td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td>Bridge Horticulture Chair</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>Genomics Bldg Equipment</td>
<td>36,000</td>
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</tr>
<tr>
<td>Environmental Degree Programs</td>
<td>12,500</td>
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<tr>
<td>Writing Intensive Courses</td>
<td>22,400</td>
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<tr>
<td>Faculty Sabbatical Supplement</td>
<td>33,290</td>
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<tr>
<td>Freshmen Seminars</td>
<td>16,000</td>
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</tr>
<tr>
<td>Living/Lrng Community Grants</td>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>Graduate School/Research Support*</td>
<td>819,153</td>
<td></td>
</tr>
<tr>
<td>Total FY03-04</td>
<td>$0</td>
<td>$1,107,343</td>
</tr>
</tbody>
</table>

* As of October, 2003