

Update to Plan of Work

Wisconsin Agricultural Experiment Station

**College of Agricultural and Life Sciences
University of Wisconsin-Madison**

**Federal Fiscal Years
2005 and 2006**

Research Activities

Submitted April 2004

Certification: _____
**Margaret Dentine, Executive Director
Wisconsin Agricultural Experiment Station**

Update to Plan of Work, Wisconsin Research

General Plan for update for 2005-2006

Our present plan of work has been operating well to utilize the formula funding to address Wisconsin and regional issues. We intend to continue our practices for stakeholder input, prioritization of projects, relative emphasis on the five goals, relative proportion of projects aimed at goals for short-term, intermediate and long-term impacts and integration of research/extension activities. The following is a brief summary of our procedures that include wide participation of faculty committees, peer review, stakeholder meetings and feedback, continual revision of portfolio of activities and accountability of projects. Each year, many individuals review our portfolio and progress and this input directly affects the writing, review and selection of proposals for funding. In every proposal, an accounting of past results insures that impacts and outcomes of the projects are included in the criteria for future funding. We believe that the Wisconsin Agricultural Experiment Station fully meets the ALRA requirements and intent to improve the effectiveness of formula funding in solving problems in agriculture, natural resources, and rural communities.

Background:

CHOICE OF REPORTING

The Wisconsin Agricultural Experiment Station, as an 1862 Land Grant Institution, has chosen to file a separate Plan of Work for USDA-funded research activities at the University of Wisconsin (UW). Institutions involved include the University of Wisconsin-Madison and the University of Wisconsin-Stevens Point for the period of federal fiscal years 2005 through 2006. Programs included in this plan are those funded by formula funds provided under the Hatch Act, McIntire-Stennis Cooperative Forestry Research Program, and the Animal Health and Disease Research Program.

POINT OF CONTACT

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ADOPTIONS BY REFERENCE

We adopt by reference the national Coordinated Multi-state Research Framework for fulfillment of our obligations to the AREERA's multistate, multi-disciplinary and integrated activities. More details are available on the WWW at:

<http://www.agnr.umd.edu/users/NERA/workshop/RPAFramework.html>

Reporting of Station accomplishments from formula funded research programs will be through annual reports of multistate projects and institutionally integrated AD-421s and through the NIMSS system at <http://www.lgu.umd.edu/> for multistate activities.

Financial statements of expenditures will come directly from the Wisconsin station as AD-419s.

ORGANIZATION OF WISCONSIN EXPERIMENT STATION

The Director of the Experiment Station is Dean Elton Aberle of the College of Agricultural and Life Sciences (CALs) who has designated an Executive Director, Margaret Dentine (Associate Dean, Research Division, CALs) to be responsible for research operations. The CALs Research Division is responsible for reviewing proposals, making funding decisions, and administering grants in cooperation with the University of Wisconsin-Madison School of Veterinary Medicine, the University of Wisconsin-Madison School of Human Ecology, and the University of Wisconsin-Stevens Point College of Natural Resources.

Additional information on the organization and personnel of UW-CALs is available on the college website at:

<http://www.cals.wisc.edu/>

Additional information on the Hatch, McIntire-Stennis and Animal Health competition including the Call for Proposals for the Madison campus is available at:

<http://www.cals.wisc.edu/research/hatchindex.html>

The CALs total research expenditures in state fiscal year 2003 was \$100.2 million -- 67 percent of CALs total budget. Of the research budget, 46 percent came from federal competitive grants, 6 percent from federal formula funds, 31 percent from the state, and 17 percent from nonfederal gifts and grants and sales receipts. Of the federal competitive grants funds, more than half came from the National Institutes of Health, with substantial contributions from the Agency for International Development, National Science Foundation, U.S. Department of Agriculture, and other federal agencies. Many of the research projects do not fall under the Experiment Station activities, but contribute technical expertise, graduate training, and an intellectual community that strengthens those projects supported by formula funds.

Federal formula funds remain an essential part of the College's overall research portfolio and need to be sustained in the future. These stable funding resources are used nearly exclusively to support research projects (not permanent salary) at Wisconsin; to complement the more basic research projects funded through competitive grants; and are widely used to fund multi-disciplinary, applied, problem-solving research projects that now lack adequate funding from all sources.

Within the College of Agricultural and Life Sciences, the Research Advisory Committee, a faculty committee of 11 members appointed by the Associate Dean for Research with ex-officio members of the Assistant Dean for Research and the Director of the School of Natural Resources meets regularly to discuss research issues. This committee recommends research

policy guiding distribution and use of formula funds and is the primary peer review committee for Hatch and McIntire-Stennis proposals (see Appendix B). The committee requires policies and procedures that have been implemented to distribute formula funds on a competitive process.

OPERATING PHILOSOPHY

The Wisconsin Experiment Station is committed to the concept of investigator-driven and peer-reviewed research activities. The general philosophy in allocating formula funds is to provide support for specific reviewed projects rather than to distribute block amounts to faculty or departments. At the University of Wisconsin, faculty appointments are funded with state appropriations thus releasing nearly all formula funding for project support. Expenditures are allowed under a series of guidelines annually reviewed by a faculty committee (<http://www.cals.wisc.edu/research/hatchindex.html>). Matching funds come primarily from state support of salaries for investigators and research staff.

Formula funds are distributed to approved projects with yearly budgets. Approximately 200 projects are funded with formula funds each year with budgets that include personnel (mainly graduate students) and supplies. Funding of capital equipment items, some of which may be shared by several projects, are prioritized by departments and funded in a separate exercise. Travel to multistate research meetings is provided for the official representative from a central pool of funds.

Extension has its own Chancellor and is a separate “campus” within the University of Wisconsin System. CALS faculty with Extension specialist appointments as specialists are housed at the Madison campus with an annual transfer of funding for portions of their appointments. These faculty are fully integrated into departmental teaching and research programs and can apply for research project support under the formula-funded competitions listed above. County-based Extension faculty members are participants in research teams, but are not principal investigators for projects supported by formula funds. Thus the funding of joint research-extension efforts is accomplished largely through salary support of Extension faculty and project support from competitive awards of research formula funds.

PEER AND MERIT REVIEW PROCESS

Colleges at the various University of Wisconsin System campuses utilize faculty committees to advise on research policies and to provide review of proposals. Committees are asked to review proposals using criteria that include both merit (appropriateness to program guidelines and importance of research to state needs) and scientific peer review of the approach and methods. Within the Hatch and McIntire-Stennis call for proposals, a separate call for interdisciplinary work invites joint proposals from several scientists. Separate committees are used for separate funding which include: Hatch and McIntire-Stennis proposals at the UW-Madison are reviewed by a Faculty Advisory Committee appointed by the Wisconsin-AES Executive Director, Margaret Dentine with assistance of the Director of the School of Natural Resources, Kevin McSweeney; Animal Health proposals are reviewed by a faculty committee appointed by Jim Tracy, Associate Dean for Research, UW-Madison School of Veterinary Medicine; and McIntire-Stennis proposals at UW-Stevens Point are reviewed by a committee appointed by Victor Phillips, Dean, College of Natural Resources.

Proposals for Hatch and McIntire-Stennis funding on the UW-Madison campus are reviewed by a 11-person faculty committee. Each proposal receives two reviews from outside the committee using established experts in the field from the Madison campus, other UW campuses, WI state agencies, non-governmental organizations, and occasionally from scientists from other states. Panel reviews are discussed by a primary and secondary reviewer from the campus committee and the entire group ranks the proposals using three criteria that include merit, quality of science, and ability of the researchers to complete the project.

Proposals for research grants from Animal Health Formula Funds are reviewed by the Research Committee of the School of Veterinary Medicine (SVM) in a dual peer review process. After receiving and reading all proposals, the Research Committee first meets to select two peer reviewers, experts in the area of each proposal. These experts are asked to comment both on the scientific merit as well as the relevancy to animal health and specifically to health of livestock in Wisconsin. The Associate Dean for Research of the School of Veterinary Medicine together with the Research Committee from the SVM reviews the overall portfolio of research projects sponsored by the Animal Health Formula Funds to make sure that the portfolio of projects is representative of the livestock health issues in Wisconsin.

At UW- Stevens Point, the McIntire-Stennis Proposal Review Panel consists of five members, three from the College of Natural Resources and two from the forestry community in Wisconsin. Each review panel member was asked to rank the proposals using the following criteria:

- Scientific and technical merit
- Ability of the principal investigators to perform the research
- Potential for publishable results
- Recommended research topics by the UWSP Forestry Advisory Committee

Multistate efforts are peer-reviewed by the regional committees in the North Central region using a several stage process. Committees of departmental chairs and heads from pertinent departments review the proposals and make recommendations to the subcommittee of the North Central Region Administrators (NCRA) Committee. Some Wisconsin faculty are also cooperators in multistate committees in the Northeast Region, Southern Region, Western Region and a few National (NRSP) projects. Each region has a review process with slight modifications. Details on North Central projects, guidelines, review process, and links to other regions are available on the WWW at:

<http://www.wisc.edu/ncra/>

STAKEHOLDER INPUT PROCESS

Stakeholders' input for the development and conduct of research relating to state needs is accomplished in a tiered system. Many departments, centers and institutes maintain advisory committees that meet periodically with researchers in the units. The College of Agricultural and Life Sciences has a central Advisory Board (see Appendix E) that meets twice a year with the Dean and Associate Deans. Members of this committee (see Appendix E for current list) are selected from a wide range of producers, industry, consumer, environmental groups and state agencies.

In addition to advisory groups, the Dean of CALS has been meeting with focus groups representing organizations within Wisconsin (see Appendix F). Groups meet about every other year. Focus groups include traditional and non-traditional stakeholders. Input from these stakeholders and from those who are performing the research is used to help highlight areas of research need.

Faculty regularly attend national scientific conferences and are members of national and international scientific committees. Many attend national forums for research priority setting such as the FAIR 2002 (Food Animal Integrated Research Symposium) and CROPS 99 (Coalition for Research on Plant Systems). These national conferences include stakeholders and representatives from federal agencies. Research priorities are reached using a consensus process.

Wisconsin Cooperative Extension has developed 15 system and issue teams comprised of University research and Extension professionals, other agency personnel, and producers to develop educational programs directed at both farm and industry clientele. System teams conduct applied research and educational programming that address issues and problems specific to commodities (dairy, beef, swine, sheep, grain crops, forages, vegetable crops, fruit crops, and urban agriculture/horticulture). Issue teams deal with integrated issues across the agricultural systems (marketing and risk management, farm business management, nutrient management, land use and agriculture, food safety and quality, and new and emerging farm and agricultural markets). Principal investigators with Hatch, McIntire-Stennis and Animal Health grants are members of both system and issue teams.

Implementation of research priorities in the formula funding process is accomplished through a compilation of research priorities within departments based on their interactions with stakeholders. Department chairs are asked every three years to provide a small number of research topics from each unit of CALS for use in annual Hatch and McIntire-Stennis calls for proposals. The Dean and Associate Deans assembled a list of common themes from this set that is included in each year's call for proposals (see Appendix C for current list).

For the Animal Health process, every two years, the Association of American Veterinary Medical Colleges (AAVMC), with numerous cosponsors organize a two-day listening conference entitled "Critical Issues in Animal Health Research Conference." Representatives from major and minor commodity groups present their positions on the most critical area for research investment. The Associate Dean of the SVM attends and helps organize this national conference. The School of Veterinary Medicine has a Board of Visitors that meets twice a year with SVM administration and faculty to provide input on critical research issues. Faculty reviewers of proposals attend annually a meeting of a variety of stakeholder groups such as the American Veterinary Medical Association, the National Pork Producers, the Bovine Practitioners Association, and the National Turkey Growers Association.

At UW-Stevens Point, concurrent with the distribution of request for proposals, members of the UWSP Forestry Advisory Committee are contacted and asked to submit priority areas of forestry-related research needs in Wisconsin. The committee consists of 21 members who are recognized as leaders in the forestry and conservation community in the State of Wisconsin.

ADDRESSING SHORT AND LONG-TERM NEEDS

In the stakeholder input process, it is clear that our stakeholders are concerned about immediate needs (e.g. nutrient management to meet new regulatory requirement) and longer-term issues (e.g. the sustainability of agricultural and natural resource systems). In proposals written by faculty for funding, a justification for how the project will meet the CSREES goals and the identified Wisconsin needs is required. In the review process, the reviewers are asked to specifically address how the proposal will need the issues and needs for Wisconsin and the nation and to characterize the project as meeting short, intermediate or long-term needs. These reviews are used by the Faculty Review Panel in prioritizing projects. In fall 2003, a review of 72 projects at UW-Madison resulted in funding of 35 projects with 6 characterized as meeting short-term needs, 17 as intermediate and 12 as long-term. This review process has been successful at identifying outstanding proposals ranging from very basic (usually longer-term impacts) to very applied (often short-term impacts). The relative proportions of proposals in each category will likely vary from competition to competition but balance will be monitored to insure proposals address all of the various categories.

SERVING THE ENTIRE COMMUNITY

The College of Agricultural and Life Science and the School of Veterinary Medicine on the UW-Madison campus are both part of a diversity initiative, Plan 2008 (see <http://www.provost.wisc.edu/plan2008/>). A new NSF funded program promotes the inclusion of women in the sciences (see <http://wiseli.engr.wisc.edu/>). With growing inclusion of Hispanics and Hmong in agriculture, more projects are addressing the needs of these two groups. CALS also has a memorandum of understanding with the College of the Menominee Nation that is bringing college and pre-college students to both campuses for reciprocal visits and education. Our current portfolio of projects covers small farms, organic producers, youth nutrition, minority enterprises, and rural communities. We expect to continue to provide research results that will improve the lives of all state residents.

PROGRAM AND PROJECT DURATIONS

Programs in this Plan of Work are composed of a number of projects with individual review and reporting. Program duration may be extended for multiple years, but the contributing projects are a constantly shifting portfolio that can be quickly redirected. Projects are approved for periods of one to five years with the majority on a four-year cycle. Proposals for new projects require a discussion of the results from previous formula fund support, which is used as part of the criteria for ranking proposals and for evaluating the ability of the team to complete the research project successfully (see Appendix D). Although a few multistate projects have been continuing for more than 10 years, revised proposals are required for review and approval at least every 5 years. Each year, approximately 25 percent of the research portfolio is shifted in new directions.

This process of continual re-examination of our portfolio allows us to address short-term, intermediate term and long-term issues. Reviewers are asked specifically about the expected impact of the research as short, intermediate or long term. A small number of approved projects may be started at mid-year as new faculty members are hired or emerging problems trigger an early start at the discretion of the Associate Dean for Research. These processes ensure that projects are pertinent to the CSREES national goals and focus on current state research needs.

Specific Plans:

GOAL 1.

Through research and education, empower the agricultural system with knowledge that will improve competitiveness in domestic production, processing, and marketing.

An agricultural system that is highly competitive in the global economy.
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Statement of Issue:

Wisconsin is among the top 10 agricultural states in the nation in terms of its cash farm receipts. Food production and processing industries have had an enormous impact on the state's overall economy. A 1995 analysis showed that agriculture generated more than a fifth of Wisconsin's business revenue, a sixth of its income and more than a million jobs. This analysis took into account the rippling economic effect of dollars spent throughout the economy by agricultural enterprises and their employees.

As Wisconsin looks to the future, its food and fiber production, processing and marketing sectors face substantial challenges:

- Stiff competition from other areas of the nation and the world are putting increased pressure on Wisconsin food and fiber producers to be low-cost producers. The traditional farm units in Wisconsin are struggling to make a transition that will meet these low-cost production demands.
- Wisconsin's smaller dairy farms are going out of business or are in transition (primarily to larger, confined operations or to intensively managed grazing systems) in an attempt to meet low price pressures. Similar pressures and transitions face other Wisconsin livestock producers, with pork and beef producers and cash grain farmers under intense economic pressure at this time.
- As changes in food and fiber production have occurred, new pressures have been brought on input suppliers, food processors and marketers. The production and marketing infrastructure can be maintained only if the underlying production units are financially successful and sustainable.
- Environmental concerns have placed additional constraints on agricultural producers. These changes have affected farm management practices, chemical inputs, feeding strategies, irrigation, livestock housing, and enterprise planning. New questions on recommendations for farm efficiency and sustainability have changed the research priorities from yield improvements to questions of whole-farm functioning and agroecosystems.

Green Industry: In addition to Wisconsin's food production, processing, and marketing sector, the Wisconsin Agricultural Experiment Station serves other large economic sectors, including the Wisconsin green industry. This industry includes the turfgrass industry, which now is valued at nearly \$1 billion a year and employs more than 30,000 workers. There are more than 280,000 acres of turfgrass on Wisconsin yards, parks, roadsides, golf courses and athletic fields. This is a

rapidly expanding industry in Wisconsin. Beyond turfgrass is the substantial industry that addresses all landscaping issues around home, commercial, athletic and recreational facilities. It is a rapidly growing economic sector that works closely with the Wisconsin Agricultural Experiment Station. It is seeking more research and technical support as concerns such as pesticide use in urban environments are elevated.

Science Status: New technologies for characterizing the genetic structure of organisms and for characterizing the function of genes have been developed. Knowledge of genomics, marker-assisted selection for improved traits, and genetic engineering have changed the type of organisms that are available in agriculture and the production systems that must be utilized. Understanding the relationships of genetics and environment on plant and animal function will be important to designing the crops and livestock and retaining U.S. competitiveness in germplasm. New methods of examining the functions of genes within organisms will provide understanding of the mechanisms by which plants and animals cope with environmental stresses and pests. Understanding of these processes will be the basis of strategies to breed better crops and livestock and manage agricultural production more efficiently. This knowledge would also offer possibilities to genetically engineer organisms for improved nutritional characteristics or modified products such as vaccines or pharmaceuticals.

Estimated Allocation of Resources (\$, (FTE)):

FFY05	FFY06
3,062,788 (227)	3,139,357 (232)

FY 05 is projected on the baseline of FY03 actual spending levels for formula funds. Projected expenditures for FY 06 include a 2.5 percent increase in formula funds for each year for Hatch, McIntire-Stennis, and Animal Health rounded to the nearest thousand. Matching funding is not included in the totals but is provided primarily with state salary dollars for the faculty and staff working on the projects.

GOAL 2.

To ensure an adequate food and fiber supply and food safety through improved science based detection, surveillance, prevention, and education.

A safe and secure food and fiber system.

Statement of Issue:

- Consumers are increasingly concerned about threats to their food safety. Perceived chemical and real microbial threats imperil not only consumers’ health, but also the economic well being of producers and processors. Outbreaks of emerging disease and pests require new management strategies and preventative measures. Approaches that use genetic resistance or incorporate natural resistance mechanisms are needed to decrease the reliance on pesticides and antibiotics.

- Increasing global trade and travel have brought new threats to agriculture and forestry. New pest and pathogen management strategies are integral to agriculture and forestry, and to sustaining the natural resource base that is essential for tourism and superior quality of life.

Estimated Allocation of Resources (\$, (FTE)):

FFY05	FFY06
124,787 (6)	127,907 (6)

FY 05 is projected on the baseline of FY03 actual spending levels for formula funds. Projected expenditures for FY 06 include a 2.5 percent increase in formula funds for each year for Hatch, McIntire-Stennis, and Animal Health rounded to the nearest thousand. Matching funding is not included in the totals but is provided primarily with state salary dollars for the faculty and staff working on the projects.

GOAL 3.

Through research and education on nutrition and development of more nutritious foods, enable people to make health promoting choices.

A healthy, well-nourished population.

Statement of Issue:

- In addition to a safe food supply, consumers want tasty, attractive, nutritious foods that promote health and well being. Through new genetic approaches and improved management and processing, foods can be tailored to give consumers more of what they want.
- Obesity is an increasing concern and the contribution of diet and exercise to combating obesity must be addressed.
- New discoveries about the interrelationships of lifestyle and health emphasize the importance of nutrition to longevity, mental health, and disease resistance. Knowledgeable consumers can distinguish between healthy choices, unsupported claims, and dangerous dietary advice.
- Distancing of the consumer from the source of food results in additional need for safe handling and processing, testing for contamination, labeling considerations, and storage guidelines.

Estimated Allocation of Resources (\$, (FTE)):

FFY05	FFY06
401,853 (34)	411,899 (35)

FY 05 is projected on the baseline of FY03 actual spending levels for formula funds. Projected expenditures for FY 06 include a 2.5 percent increase in formula funds for each year for Hatch, McIntire-Stennis, and Animal Health rounded to the nearest thousand. Matching funding is not included in the totals but is provided primarily with state salary dollars for the faculty and staff working on the projects.

GOAL 4.

Enhance the quality of the environment through better understanding of and building on agriculture's and forestry's complex links with soil, water, air and biotic resources.

An agricultural system which protects natural resources and the environment.
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Statement of Issue:

Balancing needs for improved supply and quality of food and fiber, and economic opportunity with enhancing environmental quality, presents complex challenges. Concerns about loss of biological diversity, contamination of soil, water and air resources coupled with concerns about loss of agriculture's and forestry's land base point to a need for research that optimizes production from the land with its protection. Investigation of structure and function of components of natural and managed ecosystems is essential to improve fundamental understanding of biotic and abiotic processes.

Forests cover nearly 45 percent of the state's total land area, and represent more than 50 percent of the land used in 22 northern counties. Wisconsin leads or is among the leaders in production of fine papers, sanitary products, juvenile furniture, and millwork. It also is the leading manufacturer of papermaking machinery. Like agriculture, Wisconsin's forest-related industries are facing stiff competition from other areas of the nation and the world.

The state's natural resource-based industries (agriculture, turf, and forestry) all contribute to and greatly impact Wisconsin's outdoor recreation and tourism industries. Farms, forests, and marshes produce wildlife that attracts large numbers of viewers and hunters. The 27,000 miles of rivers, 15,000 inland lakes, and numerous wetlands create some of the best fishing and recreational waters in the world. Guarding the state's ground and surface water quality through better farming practices, erosion control, wetland preservation, and other initiatives is essential for sustaining not only the tourist industry, but also the water supplies for communities and rural homesites throughout the state. Together, this natural resource system contributes to a large Wisconsin tourism industry, consistently valued at near \$6 billion a year.

Wisconsin agricultural producers are looking for strategies that will allow them to sustain production and profitability while also protecting the natural resource base and the overall environment. While educational and incentive programs remain as perhaps the most effective change strategies, the regulatory approach looms large. Siting of larger livestock rearing units and nutrient cycling are now major environmental issues in Wisconsin.

Environmental problems have grown because Wisconsin agriculture is now operating in an increasingly urbanized or non-farm, rural residential environment. Land use issues are extremely complex and beg for greater information input that will lead to workable and wise public policy decisions.

- Improved forestry management and harvesting approaches that better protect the multiple uses made of Wisconsin's public and private forests.
- Greater understanding of complex ecological and underlying basic biological principles that will lead to better management and conservation systems.

Estimated Allocation of Resources (\$, (FTE)):

FFY05	FFY06
852,727 (56)	874,045 (57)

FY 05 is projected on the baseline of FY03 actual spending levels for formula funds. Projected expenditures for FY 06 include a 2.5 percent increase in formula funds for each year for Hatch, McIntire-Stennis, and Animal Health rounded to the nearest thousand. Matching funding is not included in the totals but is provided primarily with state salary dollars for the faculty and staff working on the projects.

GOAL 5.

Empower people and communities, through research-based information and education, to address the economic and social challenges facing our youth, families, and communities.

Enhanced economic opportunity and quality of life for Americans.

Statement of Issues:

- Wisconsin farm units are making progress in adoption of improved business management practices. More needs to be done. Business planning, financial and risk management, personnel relations, and a host of other business management skills are now being developed.
- The transition to new farming structures is raising a myriad of social, economic, and environmental concerns. Assisting farm families and rural communities through the change is a major task. At the core of this challenge are quality of life issues for farm and other rural non-farm residents.
- As government commodity price support programs wind down, Wisconsin producers are facing increased price volatility and risk. Both producers and processors need to learn and apply new strategies for dealing with these increased market challenges.
- Policy decisions on agricultural price supports, natural resource management, and social costs of various strategies are constantly under revision and require better tools and knowledge for sound decision-making.
- Individual decisions about life choices, applications of new technology, and implications for citizens require access to sound sources of scientific information.

Estimated Allocation of Resources (\$, (FTE)):

FFY05	FFY06
374,679 (18)	384,047 (19)

FY 05 is projected on the baseline of FY03 actual spending levels for formula funds. Projected expenditures for FY 06 include a 2.5 percent increase in formula funds for each year for Hatch, McIntire-Stennis, and Animal Health rounded to the nearest thousand. Matching funding is not included in the totals but is provided primarily with state salary dollars for the faculty and staff working on the projects.

SUMMARY OF ALLOCATED RESOURCES (\$, (FTE)):

	Funding	Personnel (FTE)
Goal 1:	\$ 3,062,788	227
Goal 2:	\$ 124,787	6
Goal 3:	\$ 401,853	34
Goal 4:	\$ 852,727	56
Goal 5:	\$ 374,679	18
Total:	\$ 4,816,834	341

FY 05 is projected on the baseline of FY03 actual spending levels for formula funds. Projected expenditures for FY 06 include a 2.5 percent increase in formula funds for each year for Hatch, McIntire-Stennis, and Animal Health rounded to the nearest thousand. Matching funding is not included in the totals but is provided primarily with state salary dollars for the faculty and staff working on the projects.

Within the total Hatch allocations, at least 25 percent of these funds will be spent on joint extension-research projects and the multistate (regional) formula allocation will be spent on multidisciplinary, multistate projects approved through the four regional experiment station committees. Specific projects will be identified in the annual reporting.

Appendices:

Mission and Vision Statement (Appendix A)

Description of CALS Research Advisory Committee (Appendix B)

Areas of Identified Research Need for Wisconsin (Appendix C)

Nature of the Proposal Review (Appendix D)

College Advisory Committee Description and Membership (Appendix E)

Focus Group Lists (Appendix F)

APPENDIX A. MISSION AND VISION STATEMENT

College of Agricultural and Life Sciences University of Wisconsin- Madison

Mission

The College of Agricultural and Life Sciences improves quality of life by discovering, critically analyzing and sharing knowledge in food and agriculture, the life sciences, natural resource and environmental stewardship, and rural community development.

As a partner in the University of Wisconsin System, the College offers strong research-based education that is responsive to public needs, and sensitive to social, economic and environmental concerns. The College places great emphasis on the discovery of knowledge, with a commitment to the application of knowledge for the betterment of society. The College advances the technical skills and the intellectual growth of undergraduate and graduate students, and all who seek knowledge. It broadens their appreciation of cultural diversity, promotes environmental stewardship and helps them solve problems and take advantage of opportunities.

Our Vision

A College known for its quality education, preparing students for life-long learning and effective citizenship in a global community.

A College known for its superb science, spanning knowledge generation from fundamental discovery through problem-solving applications.

A College known as the premier global Land Grant College, because it responds to societal needs and is a positive force for change.

The College is Committed to Fulfilling its Vision, by:

- Maintaining a community of scholars committed to excellence.
- Promoting individual creativity and initiative that are promoted and applied to broader University and societal goals.
- Encouraging the free flow of ideas, cooperation and programs across departmental and college boundaries.
- Enriching education through research, outreach and Extension.
- Interacting with constituents, adapting to change and addressing society's complex problems through multidisciplinary teamwork founded on disciplinary strength.

- Cultivating intellectual, cultural, ethnic and gender diversity in its students, faculty, staff and visitors.
- Pursuing its land-grant mission and the integration of that mission into the intellectual environment of the Madison campus and the University of Wisconsin System.
- Opening itself to the rich variety of ideas and viewpoints present in society, and providing a forum for discussion and debate of public issues and concerns.
- Forming partnerships among faculty, public sector entities, and private citizens and organizations in planning and supporting research and educational programs.
- Integrating teaching, research and outreach on the Madison campus in:
 - molecular, cellular and organismal biology, and the ecology of biological systems;
 - stewardship of natural resources and the environment;
 - sustainability of ecosystems;
 - agricultural sustainability, profitability, and environmental protection;
 - global economic and environmental interdependence;
 - international agricultural development;
 - rural, community and economic development; and
 - nutrition, health, and the food and fiber system.

From: *An Update of College Plants to Recognize New Realities, Oct. 10, 1996*

APPENDIX B. DESCRIPTION OF CALS RESEARCH ADVISORY COMMITTEE

Function/Charge: The Research Advisory Committee will provide a mechanism for continuing faculty participation and peer review in management of the funding that supports CALS research program. The committee will receive the ad hoc peer reviews of research proposals submitted to CALS Research Division and make funding recommendations based on scientific merit and programmatic priorities. The committee will also advise on the design and implementation of new research initiatives.

The committee will operate as a review panel in the management of the division's competitive grants program for allocating research funds. The committee will provide mechanisms for continuing participation of faculty and others in setting the research agenda for the college. The committee will participate in the formulation and review of policies that will govern the program and administration of the Research Division. The following are examples of the policy issues that the Research Advisory Committee will be called upon to address.

- Advise on the existing review process for distribution of formula funds.
- Assist in development of new multi-disciplinary/multi-principal investigator programs.
- Advise on the balance of allocation of funding for single- and multi-principal investigator projects.
- Advise on the allocation of formula funds for support of research infrastructure.
- Analyze and advise on the implementation of recommendations from other committees, including the Futures Planning Committee (1992), the Committee on Research Infrastructure Support, the Biological Facilities, and others such as will arise from the master planning process.
- Advise on strategies to enhance the visibility, stature, and strength of the experiment station.

Meetings: The committee will meet frequently and regularly with the Executive Director and staff of the Research Division. The agenda for these meetings will be set consultatively.

Current Research Advisory Committee membership:

Member:

Paul Voss, Chair
Phillip Barak
Sebastian Bednarek
Andrew Bent
Walter Goodman
Shawn Kaeppler
Sara Patterson
Lewis Sheffield
Janet Silbernagel
James Steele
Jeffrey Stier

Department:

Rural Sociology
Soil Science
Biochemistry
Plant Pathology
Entomology
Agronomy
Horticulture
Dairy Science
Landscape Architecture
Food Science
Forest Ecology & Management

APPENDIX C: AREAS OF IDENTIFIED RESEARCH NEED FOR WISCONSIN

Within these national goals, states are asked to draw on stakeholder input to help direct use of formula funding. In Wisconsin, faculty meet regularly with a number of college and departmental advisory groups, commodity organizations, state agencies, consumer groups, and private citizens. Input from these stakeholders, and from those performing the research, is beneficial to assist in highlighting areas of research need. Department chairs are asked to provide a small number of research topics from each unit of CALS for use in Hatch and McIntire-Stennis call for proposals. The following is a compilation of common themes identified in Spring 2002. Note: Research proposals from all topic areas will be considered, and ranked according to the criteria provided in this call for proposals. The list below is provided to draw attention to needs currently of interest within the state.

- Mechanisms of pest and pathogen resistance and safe and effective control, with minimum effects on environmental quality and human health.
- Effects of change in global climate, population pressures, or public policy on agricultural production, environmental resources, ecosystem management, and future land uses.
- Identification of socioeconomic forces that shape the viability of Wisconsin industries and employment including agriculture, forestry, wildlife management, recreation, and other land uses.
- Research on food safety, nutritional health, environmental protection, and biotechnology and on providing information on dietary choices, lifestyle and community decisions.
- Sustainable agricultural and forestry production and processing systems that provide improved food safety and security, environmental protection, economically viable communities, and human well-being. This need requires an understanding of basic life processes in order to manage biotic systems for human use.

APPENDIX D: NATURE OF THE PROPOSAL REVIEW

Hatch and McIntire-Stennis Proposals

The Faculty Review Panel (FRP):

The Associate Dean for Research selects members of the FRP in consultation with the Research Advisory Committee (RAC). Two members of the FRP and at least two ad hoc reviewers review each proposal. The two FRP members are designated primary or secondary reviewer. The CALS Research Division, in consultation with RAC members, selects the ad hoc reviewers. Where possible, ad hoc members are CALS faculty. However, other reviewers, both on and off campus, may be appointed as needed. The selection criteria for FRP members and ad hoc reviewers are scientific excellence, appropriate disciplinary expertise, and overall balance. No member of the FRP may have a proposal being reviewed under this call. When submitting a proposal, applicants may request an individual(s) be excluded from selection as a reviewer. Conversely, applicants may also suggest individuals for consideration as reviewers.

For Reviewers:

Reviewers are asked to critique and evaluate proposals in a constructive manner, identifying both strengths and weaknesses of the proposal(s) under review. Reviews should be concise and include comments addressing each of the following:

- An evaluation of the scientific significance of the objectives and alignment of project goals and funding source. This appropriateness criteria is equally important to scientific merit and PI record of achievement.
- A judgment of the potential for solving Wisconsin problems is a key element of the formula funding guidelines. Please indicate whether this project would meet short intermediate or long-term needs for Wisconsin.
- An evaluation of the research team's ability to accomplish the stated objectives, and the match between these objectives and available resources. For teams with multiple investigators, please include a plan of coordination across team members.

Review Process:

- Copies of the proposal are sent to two members of the Faculty Review Panel (FRP), and at least two ad hoc reviewers. Each will prepare a written review of the proposal assigned them, and rank it on a scale from excellent to unacceptable. The completed reviews are forwarded to the Research Division office and recorded anonymously upon receipt.
- Prior to a meeting of the FRP, the primary reviewer receives copies of all reviews, anonymity maintained, on which they have been selected as a primary reviewer, to lead the discussion on proposals assigned them.
- At the meeting, the primary reviewer gives a brief description of the proposal, the principal investigator's background, and his or her assessment of the proposed research. The secondary reviewer will provide his/her evaluation and raise any points that may have been overlooked. In areas where the FRP has insufficient expertise in the proposed research, an ad hoc reviewer may be selected as a primary or secondary discussant. The primary reviewer provides remarks from ad hoc reviewers, and clarifies any confusing issues.
- After the FRP discusses each proposal, it is ranked for funding. This process provides for ranking reconsideration as other proposals are reviewed and ranked. Therefore, an

inappropriately negative external review will *not* condemn a given proposal. After placement of all proposals, FRP members will review the compiled list to modify any inappropriate placements. The prioritized list is then submitted to the Associate Dean for Research. Approximately 50% of proposals are anticipated to receive funding approval.

- The primary reviewer on each proposal prepares a summary of all reviewer comments and FRP discussion. These materials, along with individual reviews and the summary, will be forwarded to applicants.

APPENDIX E: COLLEGE ADVISORY COMMITTEE DESCRIPTION AND MEMBERSHIP

BOARD OF VISITORS

Functional Statement: The Board of Visitors for the UW-Madison College of Agricultural and Life Sciences serves as an outside advisory group to the Dean of the College. Members will have attained prominence in agriculture, natural resources, life sciences, or rural development and are chosen because of their value in providing a sound external perspective to the Dean.

The Board has three primary objectives: 1) to provide an external perspective and important link between the agricultural, natural resources, life sciences and rural development communities and the College of Agricultural and Life Sciences; 2) to provide an advocacy network for the College; and 3) to assist in major fund-raising efforts.

The Board functions at the pleasure of the Dean. Meetings will be scheduled at least twice yearly. Detailed agenda and supporting materials will be provided for each meeting.

The total Board membership is 23. Membership on the Board shall be for a nonrenewable term of four years, with the following exceptions. Individuals appointed to less than a full four year term are eligible to be reappointed to a full four year term. Former Board members become eligible for reappointment to the Board one year after their four-year term expires.

Six to seven new members of the Board will be appointed annually in December by the Dean upon recommendations of the Executive Committee. The new members will be formally announced at the Spring Meeting.

In the selection of candidates for the Board, the following criteria will be considered. The candidate will: 1) be well known in his or her field of work, 2) have a commitment to the College, 3) have exhibited leadership in areas that relate to the work of the College, 4) add some area of expertise to the Board, and 5) have the ability to influence others on behalf of the College.

Members of the Board will become Emeritus Board members at the conclusion of their terms. Emeritus Board members will be formally recognized for their service at the Fall Meeting.

The officers of the board shall consist of the Chair, the Chair-Elect, and the Immediate Past Chair and shall serve as the executive committee of the board. Candidates for the position of Chair and Chair-Elect are recommended by a Nominating Committee appointed by the sitting Chair. Recommendations must be approved by the full board. The Chair and Chair-Elect serve two-year terms and are to be chosen from members of the Board who have been present for at least two meetings of the Board. The new Chair and Chair-Elect will be elected during the business session of the Fall meeting, even numbered years (1998, 2000, etc). Past chairs are eligible for a second consecutive four-year term on the Board. Chairs and Chairs-Elect are eligible for reappointment for the duration of their tenure on the Executive Committee.

Membership on the Board of Visitors is a recognition of personal and professional achievement. The College acknowledges the need for active participation of Board members in all the Board's stated goals. Appointment should be considered among the highest distinctions given by the College.

Board of Visitors, January 2004

Will Allen
Growing Power Inc.

Ms. Juelene S. Beck, CEO
Douwe Egbert's Coffee Systems

Dr. James R. Behnke
Retired, Advisor to the CEO
Pillsbury Corporation

Ms. Linda Bochert
Michael Best & Friedrich LLP

Ms. Kitty Clark Cole
Independent Fundraiser and Marketing
Specialist

Dr. Randall L. Dimond
Promega Inc.

Mr. Gordon C. Foss
Badgerland Farm Credit Services

Lou A. Holland
Holland Capital Management

Daphne R. Holterman
Rosy-Lane Holsteins LLC

Robert B. Horsch, Ph.D.
Vice President, Monsanto Company

Dr. Peter J. Huettl
Applied Sciences, Inc.

William "Butch" Johnson
Johnson Timber Corporation

Mr. Pete Kappelman
Dairy Farmer

Frank N. Kotsonis
Retired, Monsanto Company

Mr. Terry A. Kurth
Midwest Lawn Care LLC

Mr. John W. Mommsen
Lazy A Ranch

Mr. Bliss C. Nicholson
The Bruce Company of Wisconsin, Inc.

Rod Nilsestuen, Secretary
Department of Agriculture, Trade, and
Consumer Protection

March Riechers
Riechers Beef

Mr. Gary Siporski, President
Citizens State Bank of Loyal

Frederick Usinger
Fred Usinger, Inc.

Deborah Van Dyk, Vice President,
Legal Affairs
Schreiber Foods, Inc.

Hans Zoerb
Cargill

APPENDIX F: FOCUS GROUP LISTS

Roundtables

Purpose: The primary goal of the CALS Roundtable is to improve communication between the College and the people it serves. The Roundtable would provide periodic opportunities for leaders of user groups to interact informally with CALS administration and faculty to discuss: a) user group needs and opportunities; b) current CALS programs and program proposals; and c) ways to increase cooperation among user groups, the university, and state and federal agencies. Discussions would focus primarily on issues related to CALS research, education and extension/outreach programs.

Roundtables Invitees

General Farm

- Wisconsin Agribusiness Council
- Wisconsin Federation of Cooperatives
- Wisconsin Farmers Union
- National Farmers Organization
- Wisconsin Farm Bureau Federation
- Wisconsin Women for Agriculture
- Wisconsin State Grange

Animal Agriculture

- AgSource Cooperative Services
- Agri-Services Assn.
- Cattlemen's Assn.
- Dairy 2020
- Pork Producers Assn.
- Professional Dairy Producers of Wisconsin
- Poultry Improvement Assn. Cooperative
- Wisconsin Sheep Breeders Cooperative
- Assn. of Professional Agricultural Consultants
- Wisconsin Milk Marketing Board
- Consortium of Animal Agriculture Resource Development

Environmental and Natural Resources

- Audubon Society
- Citizens for a Better Environment
- Citizens Natural Resources Association
- Environmental Decade
- Izzak Walton League of Wisconsin
- John Muir Chapter - Sierra Club
- Land and Water Conservation Association
- Nature Conservancy
- River Alliance of Wisconsin
- Wildlife Federation
- Wildlife Society
- Wisconsin Strategic Pesticide Info. Project
- Wisconsin Wetlands Association

Food Processing and Marketing

- Canned Vegetable Council, Inc.
- Cheese and Specialty Food Merchants Assn.
- DATCP - Division of Food Safety
- Midwest Food Processors Assn.
- Professional Dairy Producers of Wisconsin
- Wisconsin Association of Meat Processors
- Wisconsin Cheese Makers Assn.
- Wisconsin Milk Marketing Board

Plant Group

- Corn Growers
- Soybean Growers
- Cranberry Growers
- Forage Council
- Potato and Vegetable Growers
- Assn. of Professional Agricultural Consultants
- Michael Fields Institute
- Ag Lime Assn.
- Fertilizer and Chemical Assn.
- Ginseng Growers
- Crop Improvement Assn.

Green and Forestry

- Wisconsin Chapter of the American Society of Landscape Architects
- Governor's Council on Forestry
- Wisconsin Landscape Federation
- Natural Vegetation/Restoration
- Wisconsin Paper Council
- Professional Lawn Care Assn.
- Wisconsin Seed Producers
- Wisconsin Sod Producers Assn.
- Wisconsin Turfgrass Assn.
- Wisconsin Woodland Owners Assn.

Biotechnology

- Agracetus
- Lab Safety Supply
- Novagen
- PanVera
- Promega
- Winston Brill & Associate
- Third Wave Technologies

Sustainable and Organic Food Producers

- Michael Fields Agricultural Institute
- Midwest Sustainable Agricultural Working Group
- Wisconsin Farmlands Conservancy
- Wisconsin Rural Development Center
- Madison Area Consumer Supported Agriculture Coalition
- Grassworks, Inc.
- Wisconsin Grazers Network
- Wisconsin Sustainable Farmers Network
- Wisconsin Women's Sustainable Farming Network
- Kickapoo Organic Resource Network
- Organic Valley CROPP Cooperative

Consumer and Non-Traditional Groups

- Urban League of Madison
- State of Wisconsin Hispanic` and Migrant Services Coordinator
- Tsyuhekya/Oneida Nation of Wisconsin
- Community Action Coalition
- Midwest Anti-Hunger Network
- Rainbow Farm Corporation
- East High School Former Principal (Milton McPike)
- Second Harvest Food Bank of Southern Wisconsin
- Kellogg Project (Tom Lyon, Cooperative Resources International)
- Extension Homemakers
- Consumer Office of Wisconsin Department of Agriculture, Trade and Consumer Protection
- Consumers for Fair Trade
- United Refugee Services of Wisconsin