

REPORT
OF THE
ACADEMIC SENATE'S WORKGROUP
ON THE
DIVISION OF AGRICULTURE AND NATURAL RESOURCES (DANR)

Submitted To:

THE ACADEMIC COUNCIL
UNIVERSITY OF CALIFORNIA

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Note: This report and the recommendations contained herein were endorsed by the Academic Council on June 7, 2000.

EXECUTIVE SUMMARY

The University of California Division of Agriculture and Natural Resources (DANR) Workgroup was formed by the Academic Council to, "recommend ways to build relationships, communications, and mutual respect between DANR and the Academic Senate." The Workgroup, consisting of six Academic Senate members including two Faculty affiliated with DANR, approached the task primarily by interviewing Faculty, administrators, (CE) Specialists, and CE Advisors who understood the DANR operation. The Workgroup also reviewed many relevant documents to aid in the deliberations that eventually led to the formulation of twelve recommendations.

DANR is a complex organization with the mission, "to serve California through the creation, development, and application of knowledge in agricultural, natural, and human resources." Its annual budget is approximately a quarter of a billion dollars, which is comparable to a small UC campus or a small national laboratory. The agricultural and applied research and outreach programs are delivered through the Agricultural Experiment Station (AES) and the Cooperative Extension (CE). About 500 AES Faculty and 150 CE Specialists are located on three campuses: Berkeley, Davis, and Riverside, or 10 Research and Extension Centers. 280 CE Advisors operate from 64 Cooperative Extension offices. While the designation AES Faculty is not official, we will use that term to refer to professorial series Academic Senate members at the three campuses who participate in AES activities, and are funded by a combination of I&R and DANR OR funds. The Natural Reserve System (NRS) manages more than 130,000 acres on 33 sites that are used for research and for education, including K-12 field trips.

The Workgroup examined issues where shared governance by DANR with the Academic Senate could advance DANR's goals. Attention focused on three general issues: 1) mechanisms for linkage between DANR and the Academic Senate, 2) academic personnel appointments within DANR, and 3) development of policies to attract non-AES Faculty to contribute to the DANR mission. Seventeen findings of the Workgroup were developed.

Findings and Conclusions:

1. The AES and CE components of DANR are part of a complex and large organization with important outreach and research components and with three types of professional scientific/technical staff: AES Faculty, CE Specialists, and CE Advisors.
2. AES Faculty have collectively responsibilities for basic research, applied research, classroom teaching, graduate student training and research supervision, and professional and university service. In these regards, they can be compared to faculty in medical schools, engineering schools, and other professional schools.
3. DANR does have significant mission oriented research and outreach responsibilities. AES Faculty as a group have mission-oriented research responsibilities but very limited outreach responsibilities. The CE Specialists and the CE Advisors conduct the outreach.

4. While the Vice President - Agriculture and Natural Resources is the Director of AES, the management of the AES is highly decentralized and is largely the responsibilities of the Deans, Vice Chancellors, and Chancellors on the three campuses. As a consequence, AES Faculty have limited accountability to, or reporting relation with, the DANR Vice President.
5. Historically, AES Faculty in DBS, CAES, CANS, CNR, SVM have had dual responsibilities defined by their split I&R and OR eleven-month appointments. More recently, all hires into AES Faculty positions have been as 9 month split I&R and OR appointments, which is comparable to the majority of UC faculty with only I&R appointments.
6. Normal tensions do exist between the DANR VP Office and some Deans concerning the desirable degree of decentralization and autonomy of the AES. At one interview, advice was given that CE Advisors should report through the Deans as they do at other land-grant institutions. At most other land grant institutions, the Dean is CE Director or supervises the CE Director. It is too early to determine the impact of the recent DANR re-organization on operations, working relations, and attitudes.
7. The CE Specialists do have responsibilities for applied research and outreach to CE Advisors, the agricultural industry, and others. Nevertheless, some perform some educational functions, such as advising and examining graduate students. Many of them have interest in being recognized in a more equivalent manner to AES Faculty, such as Academic Senate membership or equivalent salary schedules.
8. An increasing number, but still a minority, of CE Advisors have Ph.D. degrees. Advisors are required to engage in applied research and to publish. Consequently, they are becoming less dependent on the Specialists for technical guidance. At the same time, there is some research collaboration between the CE Advisors, as one group, and the campus-based CE Specialists and AES Faculty, as another group.
9. It is difficult for this Workgroup to justify the need for Specialists as a conduit of technical information between the AES Faculty and the CE Advisors. The direct connection between AES Faculty and CE Advisors appears more feasible in recent years. Some joint extramural funding provides evidence that it is occurring.
10. The outreach efforts of CE are very broad; they extend beyond farmers to youth, urban areas, natural resources, and the environment.
11. OR funding to UC Faculty for the AES is essentially limited to five colleges or divisions on three campuses. While such a focus was historically justified, there is significant research related to agricultural and natural resources on all campuses. Many potential contributions from other UC Faculty to the DANR mission are not aggressively pursued.
12. The Natural Reserve staff and budget comprise small fractions of the total DANR staff and budget. The acreage of wildlands under their responsibility is nevertheless large and important as an underutilized resource for research and teaching.

13. UC over the years has not provided growth in the budget for management of the Natural Reserves that matches the growth in acreage and importance to California.
14. Although concerns to the contrary were heard, there is evidence of a commitment by DANR to UC Affirmative Action goals based on October 1998 data.
15. There has not been any Academic Senate monitoring and consultation structure for DANR and its important activities. Unlike nearly any other UC academic administrator, from the departmental chair level to the UC President (an exception is the Vice President for Health Affairs), the DANR Vice President has no formal mechanism to receive Faculty advice from the Senate.
16. As part of the UC system, many DANR issues clearly are legitimate Faculty concerns. These include, but are not limited to, issues of merit and promotion, resource utilization and research oversight.
17. DANR leadership (VP Gomes and his staff, the Deans, the Regional Directors, and the Natural Reserve Director) has shown a genuine interest in, and commitment to, collegial interactions with the Workgroup and the Academic Senate.

These findings stimulated discussion that led to the following twelve recommendations.

Recommendations:

1. A formal Academic Senate mechanism for consultation by the DANR Vice President with the UC Faculty must be identified immediately.
2. A Special Committee of the Academic Council should be established for a three-year period to enhance communication with DANR, providing an advisory and shared governance role equivalent to that found normally in other segments of UC. DANR should be requested to identify a high-level administrator to serve as the liaison with this committee.
3. This DANR Special Committee should consist of one representative each from UCAP, UCORP, and UCPB and one AES Faculty representative from each of the three campuses, specified as follows: The representatives from the three AES campuses should be connected to their campus Academic Senate's committees, or their College Executive Committee. The representative from Berkeley should be the Chair of the Faculty of the College of Natural Resources (or the Chair's chosen representative). The representative from Davis should be the Chair of the Faculty of the College of Agricultural and Environmental Sciences (or the Chair's chosen representative) or the Chair of the Faculty of the School of Veterinary Medicine (or the Chair's chosen representative). The Riverside Division will be represented by an AES faculty member chosen by the Riverside Division. The DANR Special Committee should also consist of three other faculty members who are not AES Faculty or members of these other committees (UCAP, UCORP, or UCPB), for a total of nine members. The three (Academic Senate) committees should choose their representatives.

4. The AES Faculty on each of the three campuses should have a campus Academic Senate committee or structure to provide locally for shared governance of AES management and to interact with the systemwide DANR committee (or subcommittee).
5. An external review of DANR's activities should begin as soon as possible, hopefully in less than one-year's time from now. Existing procedures for MRU reviews should be applied with the additional constraint that the new DANR Special Committee plus local AES-Faculty committees should become involved.
6. External review should occur regularly on a five-year cycle. Normal UC criteria for research quality and impact should be used for evaluating the DANR/AES research contributions. The Academic Senate's new systemwide DANR Special Committee plus relevant standing committees should make inputs on the criteria for evaluating the impact of the DANR outreach.

By action of the Academic Council, the recommendations and concerns contained in the following items 7 through 12 will be addressed by the Special Committee and the external review, when established.

7. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the need for profound distinctions in the treatment of AES Faculty from other scientists at UC. For example, should dual-fund salary support be continued for new AES Faculty? Furthermore, the new systemwide standing committee (or subcommittee) should identify mechanisms whereby OR financial support (not including faculty salary) for applied research can be placed into a competitive grant program available to support all UC faculty.
8. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the need for a three-tier professional scientist structure in DANR. For example, should UC move to the two-tier professional structure that exists in agricultural programs at many other land-grant universities?
9. Mechanisms to broaden the UC community of major research contributors to the DANR mission should be created. These mechanisms should not be limited to minor programs. If as a consequence, AES Faculty must compete more intensely for OR funding, that would be healthy for the state and for UC. DANR should make formal outreach efforts to UC Faculty on non-AES campuses.
10. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the budget and the management of the Natural Reserves System.
11. Systematic efforts are required to enhance budget and staffing of the Natural Reserve System to enhance its utilization and to permit achievement of its operational goals.
12. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the successes, problems, and impacts of the recent re-organization of DANR. Recommendations should be made about desirable adjustments to procedures, policies, and management structures.

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I. INTRODUCTION

The Academic Senate was established at the time of the founding of the University of California in 1868. Its defining characteristics were written into the University's State Charter and further elaborated in the Standing Orders of the Board of Regents. The Regents have granted to the Senate authority to *advise* the administration on campus and University budgets and on the University's libraries. Furthermore, the Senate has been delegated powers over its own committee structure (SOR 105.2).

The UC Division of Agriculture and Natural Resources (DANR) Workgroup was formed in July 1998 by the Academic Council (the administrative arm of the Academic Senate) to, "recommend ways to build relationships, communication, and mutual respect between DANR and the Academic Senate." The detailed Charge and Specific Topics and Workplan are presented in Appendix A.

The Workgroup includes six Academic Senate members from five UC campuses. Two members are affiliated with DANR. The membership list is given in Appendix B. The 1998-99 Academic Council Chair, AimJe Dorr, served as the Workgroup Chair for the first three months and remains an *ex officio* member.

The Workgroup has held four meetings at DANR headquarters within the UC Office of the President, one meeting at Irvine, and a meeting at two of the three campuses (Davis and Riverside) where the Agricultural Experiment Station (AES) of DANR is maintained. The Workgroup interviewed the Vice President and Associate Vice President of DANR, the UC Vice President for Budget, five AES Deans, and numerous Associate Deans, and two Regional Directors of the DANR outreach programs. Although no meeting was held at Berkeley, the third AES campus, Berkeley administrators and researchers were invited to the Office of the President. A query was also made of all AES Faculty led by DANR with some limited response. See Appendix C for details. A list of the documents reviewed by the Workgroup is presented in Appendix D while the Workgroup Meeting Agenda are provided in Appendix E. The final draft was reviewed by W. R. Gomes, Vice President, ANR; Gordon C. Rausser, Dean, UCB CNR; Neal K. Van Alfen, Dean, UCD CAES; Mark G. McNamee, Dean, UCD Div. of Biological Sciences; Bennie I. Osburn, Dean, UCD SVM; and Michael T. Clegg, Dean UCR CNAS. Only Vice President Gomes, Dean Rausser, and Dean Van Alfen responded. Some editorial adjustments were made based on their comments.

Section II presents a description of the DANR programs. Key Academic Senate issues are identified in Section III. Findings and Recommendations are described in IV. While AES Faculty is not an official designation, we use it in this report to mean Academic Senate members at Berkeley, Davis, or Riverside who participate in AES activities and whose salaries are funded by a combination of Organized Research (OR) monies through DANR and I&R monies.

II. DESCRIPTION OF THE UNIVERSITY OF CALIFORNIA DIVISION OF AGRICULTURE AND NATURAL RESOURCES¹

"The DANR Mission Statement is to serve California through the creation, development and application of knowledge in agricultural, natural and human resources."

The Division of Agriculture and Natural Resources (DANR) has three components, the Agricultural Experiment Station (AES), Cooperative Extension (CE), and the Natural Reserve System (NRS); an integrated organizational chart is presented in Chart 1. Each component is described separately below.

General Description of AES and CE: The AES and CE component of DANR is the major land-grant arm of the University of California. The land-grant system was created by the federal government's enactment of the Morrill Act in 1862. This later led to the establishment of Experiment Stations (funded by federal and state funds other than I&R funds) which were mandated to develop "useful and practical information....through promoting scientific investigations and experiments" (Hatch Act, 1887), and implementation of a Cooperative Extension program (funded by federal, state and county funds) to "aid in diffusing useful and practical information" (Smith-Lever Act, 1914).

Agricultural, human and natural resources programs of the Division of Agriculture are delivered through the Agricultural Experiment Station (AES) and the Cooperative Extension (CE) units; see Chart 2. DANR programs are funded by a combination of public and private sources, with annual expenditures totaling \$237 million; see Charts 3 and 4. About half of the funds come from state government, about one-fourth from the federal government and the remainder from county government and the private sector.

The AES and CE components of DANR are based on the Berkeley, Davis, and Riverside campuses of the University of California, and in more than 50 regional and county offices throughout the state. The Division supervises 26 statewide special programs and projects, and ten Research and Extension Centers (REC). Administrative headquarters for DANR are in the Office of the Vice President - Agriculture and Natural Resources at the University of California Office of the President.

Agricultural Experiment Station: The Agricultural Experiment Station (AES) has 650 academic researchers, most of whom also have professorial appointments--typically, 60-80% AES (OR) research and 40-20% teaching (I&R)²; Chart 5 summarizes their distribution by academic rank. These individuals are subject to the academic personnel procedures of the Academic Senate Committee on Academic Personnel (CAP) or its equivalent on each campus.

¹ The bulk of the information of this Introduction was obtained from the University of California WEB site: <http://danr.ucop.edu/>. Some of this information has been reorganized and edited for this DANR Workgroup Report.

² Those individuals with an I&R appointment are members of the UC Academic Senate.

These academic researchers are housed in more than 50 departments, representing dozens of scientific disciplines on the Berkeley, Davis, and Riverside campuses. With more than 1,100 research projects underway at any time, AES scientists seek environmentally sound practices to produce reliable food supplies. Their work contributes substantially to California's vast increases in farming productivity, resulting in safe, abundant, inexpensive food for Californians. AES scientists exist in Departments where there are 8,000 graduate and undergraduate students in the Division's schools--the College of Natural Resources (Berkeley), the College of Natural and Agricultural Sciences (Riverside), and the College of Agricultural and Environmental Sciences, Division of Biological Sciences, and School of Veterinary Medicine (Davis).

Cooperative Extension: Cooperative Extension (CE), the principal outreach arm of DANR, comprises academic appointees attached to campus departments as CE Specialists or to county offices as CE Advisors. *In toto* there are approximately 150 CE Specialists and approximately 280 CE Advisors. UC's 64 Cooperative Extension offices are local problem-solving centers. The more than 400 campus-based specialists and county-based farm, home, and youth advisors work as teams to bring the University's research-based information to Californians. CE is a full partnership of federal, state, county, and private resources linked in applied research and educational outreach.

The CE Specialists are subject to evaluation for merit advancement on the three campuses by procedures that are analogous to the Academic Senate protocols. Some CE individuals have split appointments, e.g. 33% I&R, 33% OR, 33% CE; these individuals then have a portion of their record evaluated by a CAP. Their County Director and their Regional Director review the CE Advisors. In cases of accelerated merits, promotions and appraisals, an ad hoc peer review committee reviews each case. The ad hoc peer review committee is chosen by the CE Assembly Council and is formed identically to the Senate ad hoc peer review committees. There are different committees for most cases. The Senior Administrative Council (Regional Directors and Associate Vice President Vaux) reviews the recommendations of the County Directors, the Regional Directors and the ad hoc peer review committee and makes the final recommendation to the Vice President. This process is modeled as closely as possible to the Academic Senate's process.

There are three classifications for academic professionals associated with DANR: regular-ranks faculty (Academic Senate members), Cooperative Extension (CE) Specialists, and Cooperative Extension (CE) Advisors. There are two major types of state funding for DANR: Organized Research (OR) monies, and CE monies. All regular-ranks faculty must have at least a fraction of their salaries supported by Instruction and Research (I&R) state funds. Those regular-ranks faculty on three campuses (Berkeley, Davis, and Riverside) also associated with the AES of DANR will have partial salary support with OR funding. Other aspects of their mission-oriented agricultural research might also be supported by these state OR funds. These regular-ranks faculty with DANR salary support are identified as AES Faculty in this report. Elsewhere they have been identified as OR Faculty, but that term might cause confusion since many UC Faculty members who are not associated with DANR are supported by OR funds that appear through various Organized Research Units. To a first approximation, the AES Faculty are a distinct group from CE Specialists who also reside at the three campuses. However, a few individuals hold both faculty and CE appointments. The salary of such an individual is supported by a combination of I&R, OR, and CE state funds.

Research and Extension Centers: The Division of Agriculture also operates ten research and Extension Centers (REC) to conduct agricultural research and support UC's out-reach to local growers and ranchers. Each center is located in a different terrain and climate, from the Oregon border to the desert 700 miles south. They provide UC researchers with diverse field conditions essential for basic and applied research.

The REC system has three main purposes: (a) to provide University researchers with the opportunity to conduct research in climatic and soil zones best suited to their individual research discipline or responsibility; (b) to provide University personnel the opportunity to research solutions for important regional problems; and (c) to extend the results of research to regional clientele and industries so they may put the new information into day-to-day application.

DANR Areas of Special Effort: DANR has approximately two dozen areas of special effort that serve particular areas of need. The total current appropriations for these Statewide Programs are \$13 million with an additional \$6 million leveraged from extramural sources. Program budgets range from \$19,000 for the federally funded Farm Safety Program to \$2 million for the state-funded Integrated Pest Management Program. These are summarized in Appendix F.

The recent reorganization of DANR is described in Appendix G.

General Description of the Natural Reserve System: The statement of DANR is that the mission of the Natural Reserve System (NRS) is to contribute to the understanding and wise management of the Earth and its natural systems by supporting university-level teaching, research, and public service at protected natural areas throughout California.

The Regents of the University of California established in 1965 the Natural Reserve System, which identified seven University-owned sites as its first reserves. Today more than 130,000 acres are preserved in 33 NRS sites all in the state of California, ranging from 750 feet below sea level to 8,500 feet above. Research conducted on the reserves has generated more than 2,300 scientific publications, demonstrating the high value of this unique resource. UC owns only one-fifth of the land; the rest is managed under cooperative agreements. The NRS sites also provide outdoor classrooms for university-level teaching and opportunities for many forms of public outreach, including K-12 field trips.

By creating this system of outdoor classrooms and laboratories and making it available specifically for long-term study, the NRS supports a variety of disciplines that require fieldwork in wildland ecosystems. The NRS makes relatively undisturbed samples of the state's natural ecosystems and the facilities needed to support teaching and research available not only to students, teachers, and researchers from the University of California, but to any qualified user from any institution, public or private, throughout the world. While other colleges and universities may have one or more sites for fieldwork, none can match the size, scope, and ecological diversity of the NRS. The NRS is the largest university-operated system of natural reserves in the world.

Teaching and research are the principal activities on NRS reserves, and these endeavors benefit the public indirectly. However, the NRS also serves the public directly by making its reserves and facilities available to government agencies, conservation groups, and other appropriate organizations and by collaborating with these entities to protect the state's natural resources.

While reserve use is by permission only and all uses of NRS reserves must be consistent with the University's teaching and research objectives, the NRS makes every effort to allow the general public to visit its reserves and learn of the work conducted there.

The NRS serves the public in many far-reaching ways. One very important way is by providing unparalleled opportunities for the environmental education of K-12 youth (kindergarten through 12th grade) in both elementary/secondary schools and informal instruction programs. Because the NRS is a University-administered program, many people do not realize that all of the University campuses are involved with K-12 education on their reserves. Moreover, resident reserve staff and their families often play leadership roles in the process by not only hosting groups of schoolchildren, but also designing instructional projects, compiling collections and databases, teaching students directly, and coordinating demonstrations by resident and visiting scientists. NRS reserves help to preserve biodiversity and conserve genetic resources by protecting natural communities and rare, threatened, or endangered species for further study. In addition, NRS personnel provide technical consultation on such important community concerns as watershed protection, fire suppression, regional resource management, and potential land-use impacts.

DANR Budget: The total budget for DANR and DANR-related programs for the academic year 1997/1998 was \$247.5 million. Of this, \$175 million (including \$88 million of OR monies) was allocated to the Agricultural Experiment Station (AES), \$70 million to the Cooperative Extension (CE), and \$2.5 million to the Natural Reserve System (NRS). Details of the AES and CE 1996/1997 budgets, and the nature of their distribution to the VP - ANR and the Chancellors at UCB, UCD, and UCR are summarized in Charts 3 and 4. Charts 6 and 7 summarize funds available for research in DANR-related programs. \$87 million dollars of the above amount was under the direct control of the Vice President - ANR. The President allocated \$74 million of the \$245 million directly to the three Chancellors. The total state funded OR budget is \$250 million so that the DANR portion is the largest element.

III. KEY ACADEMIC ISSUES

The Division of Agriculture and Natural Resources is a very significant component of the University of California. Functionally it fulfills an exceedingly important mandated responsibility for the citizens of the state with respect to the creation, development and application of knowledge in agriculture and natural resources. The overall annual DANR budget of approximately one-quarter of a billion dollars, although distributed through several channels compares with the budget of a smaller campus or a smaller national laboratory.

The essential issue relates to the accepted principle of shared governance with the Academic Senate. It is found to be an integral component of virtually all campus and universitywide functions. Faculty governance serves to provide advice for the distribution of statewide University targeted funding, to provide oversight for relevant personnel appointed in the academic series, and to provide a sounding board for the wishes of the population which constitute the Faculty of the University. The Workgroup seeks to emphasize that DANR, like other universitywide organizations, should benefit from that sort of liaison. Parallels may even be drawn with the National Laboratories over which the University of California has jurisdiction. However, the linkage between DANR and the University Senate has been weak or does not exist.

DANR can achieve many benefits from regular, broad faculty consultation. Their ability to achieve their goals can be improved by a stronger liaison with the larger university community. Useful advice can be obtained. Better understanding and goodwill should lead to meaningful alliances that can attract new talent to contribute to the DANR mission. This Workgroup has thus sought to focus on three principal issues: 1) the mechanisms whereby the DANR - University Senate linkage may be secured; 2) rationalization of academic personnel appointments within DANR as compared to other faculty within the systems; and 3) the development of policies which recognize the importance of attracting and enlisting non-AES members of the University research community who can substantively contribute to the mission of DANR. The issues will be discussed from several perspectives: Budget and Planning, Organized Research, and Academic Personnel.

As noted elsewhere in this report, DANR is a complex organization functioning primarily on three campuses, with administrative headquarters in the Office of the Vice President - Agriculture and Natural Resources. While DANR has many categories of personnel, the DANR mission is fundamentally driven by the research, discovery, and outreach activities of its many UC academic personnel. Quite naturally, DANR has evolved a management and administrative process which involves extensive interaction among the three campuses, the Vice President's office and its OR faculty researchers, the Cooperative Extension and Specialists so that an agreed upon set of programs can be encouraged.

As a consequence of the review of DANR conducted by the Academic Council's DANR Workgroup, it has become apparent that DANR operates without regular consultation with the systemwide Academic Senate of the University. This puzzling omission is long standing and denies the UC faculty its customary opportunity for responsibility of shared governance.

From the Workgroup's perspective, the absence of a formal review and consultation set of mechanisms denies DANR access to the accumulated intellectual skills, wisdom and professional expertise of the entire UC faculty which could be brought to bear on some of the many challenging problems facing DANR. Furthermore, unlike any other UC academic administrator from the departmental chair level to the UC President (an exception is the Vice President for Health Affairs), the DANR Vice President has no formal mechanism to receive Faculty advice from the broad University community.

Finally the absence of a formal review and consultation mechanism between DANR and the Academic Senate, denies to the collective faculty the opportunity for oversight, review and critical evaluation of the mission and performance of DANR.

A. PLANNING AND BUDGET

AES (OR) funding is essentially limited to faculty in five schools and colleges at three Campuses that are a part of the Agricultural Experiment Station (AES). However, potential contributors to the welfare of the agricultural community exist at many UC schools and colleges. All campuses can contribute to the DANR mission. It is noteworthy that UC Merced, despite its location, will not benefit notably from DANR funding under current planning.

This restriction on the impact from and on the inputs to the largest multicampus research organization in UC history is very difficult to justify. Although agriculture can be viewed as multidisciplinary, the current DANR structure focuses fairly narrowly on a few disciplines and eliminates many scientific and technological disciplines that might have profound impacts. Mechanisms should be sought to make DANR more inclusive and more able to receive and to integrate diverse inputs. The current DANR structure is not designed to take advantage of relevant scholarship from non-AES units.

The AES management and Faculty at Berkeley, Davis, and Riverside share a common mission. The AES management is highly decentralized so that the DANR Vice President has limited capability for coordination. Some of the most effective mechanisms for collaboration in DANR are via the special programs or via commodity boards. AES Faculty, CE Specialists, CE Advisors, industry representatives, and government and non-government agency staff meet periodically to present research and outreach progress. Prior to reorganization (see Chart 1), the Committee of Deans and Directors (CODAD), and the Committee of Associate Deans and Directors (CADAD) met regularly to discuss collaborative research and outreach. This group coordinates across campus, Research and Extension Centers (REC), and county activities, and resource allocation issues. One must believe that improved coordination and communication across campuses through the Academic Senate would contribute to the better and more efficient use of resources. The AES Faculty do not have an Academic Senate mechanism for formal exchange of perspectives and knowledge. One can understand the desire for each campus to have some level of autonomy. Admittedly, there are no formal mechanisms for coordination across campuses of other academic domains. However, DANR consumes a significant proportion (about 7%) of the state-funded UC budget. Much smaller MRU's not only have more

coordination across campuses from within their ranks but also have as their purposes the exchange of information and insights across campus and college boundaries.

The distinctions between the I&R funded and OR funded activities of faculty are often not clear. The OR funding is justified historically by the mission-oriented research mission of the AES and by the inflow of large amounts of Hatch funds. However, many AES Faculty do fundamental scientific research and are similar in their ranges of activities to certain groups of non-AES Faculty. One explanation given to this Workgroup is that the Academic Senate and the University have rewarded basic research over mission-oriented research. Over time, this has led to less difference between I&R and OR research. This leads to a statement by some that the AES Faculty conduct research that is not different from other I&R-only faculty mission-oriented research. The decision to use OR funding for some portion of a faculty member's support often appears to be arbitrary. The decisions about the I&R-OR divisions of support for individual AES Faculty often do not correlate with teaching loads or with the stated DANR/AES applied research and outreach objectives. This can be especially troublesome when many UC Faculty outside of a few specific colleges could benefit from the DANR OR funding and could make very worthwhile contributions to the DANR mission.

It should be recognized that many areas that have had immense positive impacts on farm productivity and economic well being have not been strongly supported by DANR. These include mechanization and automation, refrigeration technology, transportation systems, and weather forecasting as a few examples. Arguably, these areas of knowledge have had equal or greater impact on the DANR mission than the biological sciences, which receive the overwhelming majority of the AES OR funding. In its academic planning exercises, DANR must broaden its perspective about important areas for research and outreach. For example, examination of the potential impacts of such areas as robotics, machine vision, and information technologies should be pursued. In order to make such studies effective, DANR must be bold and visionary and must vigorously reach out to many UC Faculty outside of the AES.

On the other hand, there is the perspective that the OR and I&R labels of funding for AES are highly artificial. Note that the OR funding for DANR is not a line item in the state budget (although the DANR activities are carefully observed by the state government and certain farm-industrial organizations). Under this perspective, the OR and I&R funding for these colleges is, as a combination, merely the base 19900 funding for these units. Thereby, under this perspective, there is no need for distinction between the two types of funding.

There do appear to be inconsistencies within DANR about the OR funding and its purpose. On the one hand, the OR funding is claimed to be resources for the mission-oriented research, and funds faculty who might then have reduced teaching loads compared to faculty fully funded through I&R sources. Yet, unlike other OR monies in the UC system, it is part of the base budget of a few colleges and not available for most UC faculty. A consistent formulation of the AES funding could be helpful.

B. RESEARCH

The University of California has made major contributions in the 20th Century to the phenomenal growth of agriculture in California. UC faculty continues to identify and solve relevant research problems and teach and train students and scholars. The State of California via the UC budget invests large sums annually in the AES. The use of these funds has resulted in major advances in the agricultural sciences. In addition to the campus research, DANR oversees the research of the Cooperative Extension, the 26 statewide special programs, the ten Research/Extension Centers and the 33 Natural Reserve System sites. Competitive extramural grants and contracts support a large part of the research while DANR provides the required infrastructure. Commodity groups invest heavily in targeted agriculture research. A part of the DANR budget is allocated to modest research grant programs. The Office of the Vice President-ANR manages some of these programs centrally and some are administered at the college/school/campus level. DANR resources provide tremendous opportunities for a number of UC faculty but these are mostly restricted to AES faculty. The research budget of DANR constitutes a major part of the Organized Research budget of the University of California.

Externally, DANR uses its centralized UC position to communicate with Congress, the USDA, the State Legislature, and the agricultural industry. It is clear that UCOP must have a centralized organization such as DANR to coordinate resources and assure accountability for the vast multi-campus and statewide UC agricultural enterprise. Internally, it sets up missions and priorities, coordinates system-wide programs, administrates the CE and Farm Advisors, and manages the centralized research facilities. The Program Planning Advisory Committees (PPACs) in Agricultural Resources, Human Resources, Natural Resources, and program integration aid in this process. Each committee consists of 15 DANR academics from all Division-affiliated campuses and from county offices. This process lacks any wider Office of the President, Academic Senate, or non-DANR faculty participation. DANR has tried to broaden the representation, for example, by including non-DANR faculty on a recent search committee. The Senate should do all it can to help.

In its report to the Academic Council in July 1997, UCORP raised the concern about the "lack of Senate consultation regarding DANR research policies and budget allocations." In as much as most of the agricultural and natural resources research at UC is performed by Agricultural Experiment Station faculty who are Academic Senate members, this is a legitimate area of inquiry. Senate consultation by DANR needs to go beyond its own AES members and actively engage the full Senate as required by Regental mandate.

The AES-CE institutional arrangement is also cause for concern. AES academics and CE Specialists work closely to identify important problems, solve them and bring the results back to benefit the public. A healthy interaction is vital to the success of the Land Grant mission. CE Specialists are administered by the campuses, work in AES academic departments, and have their own research programs. They must "wear two hats". The academic excellence of the AES departments would be enhanced if CE resources were used directly in conjunction with faculty research. But then the outreach efforts would suffer. The potential for breakdown at either end of the "continuum" with this model is high.

Certain faculty from UCB, UCD, and UCR have unique access to research resources through the AES. Another group of faculty distributed over the nine campuses have the skills and talents which could potentially help meet the new challenges on agriculture and natural resources. Some limited programs exist that do extend DANR funds to non-AES Faculty. The fact remains that most UC faculty know very little about DANR and its role within UC. The Workgroup is concerned that the overall mission of DANR is not being best served by restricting its research resources to just three campuses. While these concerns are legitimate, can the use of these resources be broadened within the context of Congressional and State mandates? The Academic Senate should work with UCOP and DANR to find ways to broaden the pool of UC contributors to the DANR mission. This can only enhance the stature of the University.

One issue that must be analyzed before DANR funds can be distributed more widely is the accountability for mission-oriented research and outreach. Already there is a problem here. We understand that the Davis Division of Biological Sciences, which has no CE Specialists, struggles to document its mission-oriented research.

C. ACADEMIC APPOINTMENTS

An important component of the DANR mission may be broadly defined as translational research related to improving the agricultural enterprise in the state of California. In this it broadly parallels translational efforts in the biomedical and physical sciences where the aim is to take basic discoveries or insights and provide the bridging studies to permit application of the technology and then the actual implementation of the technology. This mission is accomplished by three types of staff: AES Faculty, CE Specialists, and CE Advisors.

AES Faculty: Historically, in the UC system, the AES Faculty have been campus-based, research-oriented individuals with advanced academic degrees, who had established research programs and performed in much the same manner as I&R faculty. Thus, they engage in teaching and student supervision at all levels. Their efforts are supported by funding in large part through DANR funds passed through from state sources. From the mission perspective, their role was to provide the focused translational research that could be targeted to the needs of the agricultural community. Funds for the research efforts are achieved through both governmental agency funds as well as from funds obtained from various specialty groups interested, for example, in specific plant or animal products. Funding for their salary lines arises from I&R in addition to AES monies, reflecting the pass-through of monies designated by the state to support DANR efforts but which are then given to the three DANR campuses for support. This has led to anomalies (from the University perspective) such as the use of eleven-month appointments. The source of funding and the appointment through the AES led these individuals to be distinct within the University system, yet to be retained in an appointment series that lies outside of the academic ladder rank faculty.

CE Specialists and CE Advisors: The CE Specialists were historically the liaison between the research endeavors of the AES Faculty and the CE Advisors with the latter two being responsible for the outreach in the community. CE Advisors are the classic points of interaction of the cascade with the user, e.g., the farmer and his/her community.

Inconsistencies Within the Academic Appointment and Promotion Mechanisms: While historically the placement of the AES Faculty in the DANR organizational chart and the divisions between AES Faculty and Cooperative Extension Specialists and between the Cooperative Extension Specialists and CE Advisors made some sense, there has been over the past ten years, a substantial blurring of the distinctions between AES Faculty and the CE Specialists and CE Advisors. 1) There is an increasing fraction of CE Advisors with Ph.D and M.S. degrees. 2) Records indicate that CE Specialists and CE Advisors at all levels are active in research and many participate in publication-worthy efforts. Consequently, the County Advisor is increasingly independent of the Specialist insofar as concerns technical guidance, but functions in a more collegial fashion with the Specialist.

The above overview suggests several issues.

- The responsibilities and missions of AES Faculty indicate that they are indistinguishable from ladder rank academic faculty in medical schools, engineering schools, and other professional schools.
- In spite of the organizational affiliation with DANR, much of the management of the AES rests with the respective campus administrations and not with the DANR hierarchy.
- While the CE Specialists have responsibilities for outreach to CE Advisors, the agricultural industry and others, they nevertheless do perform some faculty-level functions such as applied research. Some engage in advising and examining graduate students. Examination of graduate students requires normal prior administrative approval. Advising of graduate students occurs via mechanisms such as 0% I&R appointments or members in pre-approved graduate programs.

Based on the above issues, several points may be considered that reflect upon faculty governance issues regarding the DANR-University axis.

First, it is reasonable to consider that an important component of the linkage between DANR and the University Senate would be the rationalization of the appointment series and organization within the DANR-University axis. Given the parallels between AES Faculty and other ladder rank FTE-holding University Faculty, it is reasonable that this population should continue to enjoy privileges and review that are accorded to those University-tracked individuals. Such privileges include but are not limited to Academic Senate membership.

Secondly, it is becoming more difficult to justify the need for Specialists as an essential linkage between AES Faculty and the CE Advisors. This raises the suggestion that current Specialists should become either CE Advisors or AES faculty as deemed appropriate.

The DANR Workgroup had received some suggestions that DANR was not committed to high standards of Affirmative Action. The Workgroup received extensive tables of data (dated October 1998) defining, over a period of time, the number and percent of female/male and ethnicity profile on both nonacademic employees (clerical and research support; SRA) of DANR, as well as on Faculty, CE Specialists and CE Advisors. The DANR Workgroup concludes that the DANR organization has an acceptable achievement record for UC-defined Affirmative Action goals, comparable to that of other large UC units.

IV. WORKGROUP FINDINGS AND RECOMMENDATIONS

We use the term AES Faculty here to refer to professorial series Academic Senate members at the three campuses who participate in AES activities and are funded by a combination of I&R and DANR OR funds.

The major Findings and Recommendations of the DANR Workgroup are summarized below.

Findings and Conclusions:

1. The AES and CE component of DANR are part of a complex and large organization with important outreach and research components and with three types of professional scientific/technical staff: AES Faculty CE Specialists, and CE Advisors.
2. AES Faculty have collectively responsibilities for basic research, applied research, classroom teaching, graduate student training and research supervision, and professional and university service. In these regards, they can be compared to faculty in medical schools, engineering schools, and other professional schools.
3. DANR does have significant mission oriented research and outreach responsibilities. AES Faculty as a group have mission-oriented research responsibilities but very limited outreach responsibilities. The CE Specialists and the CE Advisors conduct the outreach.
4. While the Vice President - Agriculture and Natural Resources is the Director of AES, the management of the AES is highly decentralized and is largely the responsibilities of the Deans, Vice Chancellors, and Chancellors on the three campuses. As a consequence, AES Faculty have limited accountability to, or reporting relation with, the DANR Vice President.
5. Historically, AES Faculty in DBS, CAES, CANS, CNR, SVM have had dual responsibilities defined by their split I&R and OR eleven-month appointments. More recently, all hires into AES Faculty positions have been as 9 month split I&R and OR appointments, which is comparable to the majority of UC faculty with only I&R appointments.
6. Normal tensions do exist between the DANR VP Office and some Deans concerning the desirable degree of decentralization and autonomy of the AES. At one interview, advice was given that CE Advisors should report through the Deans as they do at other land-grant institutions. At most other land grant institutions, the Dean is CE Director or supervises the CE Director. It is too early to determine the impact of the recent DANR re-organization on operations, working relations, and attitudes.
7. The CE Specialists do have responsibilities for applied research and outreach to CE Advisors, the agricultural industry, and others. Nevertheless, some perform some educational functions such as advising and examining graduate students. Many of them have interest in being recognized in a more equivalent manner to AES Faculty, such as Academic Senate membership or equivalent salary schedules.

8. An increasing number, but still a minority, of CE Advisors have Ph.D. degrees. Advisors are required to engage in applied research and to publish. Consequently, they are becoming less dependent on the Specialists for technical guidance. At the same time, there is some research collaboration between the CE Advisors, as one group, and the campus-based CE Specialists and AES Faculty, as another group.
9. It is difficult for this Workgroup to justify the need for Specialists as a conduit of technical information between the AES Faculty and the CE Advisors. The direct connection between AES Faculty and CE Advisors appears more feasible in recent years. Some joint extramural funding provides evidence that it is occurring.
10. The outreach efforts of CE are very broad; they extend beyond farmers to youth and urban areas, natural resources, and the environment.
11. OR funding to UC Faculty for the AES is essentially limited to five colleges or divisions on three campuses. While such a focus was historically justified, there is significant research related to agricultural and natural resources on all campuses. Many potential contributions to from other UC Faculty to the DANR mission are not aggressively pursued.
12. The Natural Reserve staff and budget comprise small fractions of the total DANR staff and budget. The acreage of wildlands under their responsibility is nevertheless large and important as an underutilized resource for research and teaching.
13. UC over the years has not provided growth in the budget for management of the Natural Reserves that matches the growth in acreage and importance to California.
14. Although concerns to the contrary were heard, there is evidence of a commitment by DANR to UC Affirmative Action goals based on October 1998 data.
15. There has not been any Academic Senate monitoring and consultation structure for DANR and its important activities. Unlike nearly any other UC academic administrator from the departmental chair level to the UC President (an exception is the Vice President for Health Affairs), the DANR Vice President has no formal mechanism to receive Faculty advice from the Senate.
16. As part of the UC system, many DANR issues clearly are legitimate Faculty concerns. These include, but are not limited to, issues of merit and promotion, resource utilization and research oversight.
17. DANR leadership (VP Gomes and his staff, the Deans, the Regional Directors, and the Natural Reserve Director) has shown a genuine interest in, and commitment to, collegial interactions with the Workgroup and the Academic Senate.

Recommendations:

A majority of the Workgroup favors establishment of a new standing systemwide Academic Senate Committee whose responsibilities are entirely with DANR and whose membership facilitates engagement with the five academic units on the Berkeley, Davis, and Riverside campuses that have substantial funding through DANR, as well as with other standing systemwide Academic Senate Committees. The existence of such a committee unambiguously establishes a locus for Senate engagement with DANR and promises a committee membership that is well informed about DANR issues. Such a committee would, however, set a precedent in being the first that is organized along what can be considered disciplinary rather than functional lines. Whether this is a precedent we wish to set and whether there are other disciplinary areas (e.g., health sciences, professional schools) that also should have standing committees, or may argue for such committees, are issues worthy of debate. Many of the topics that such a DANR committee (or other committee organized along similar lines) might consider (e.g., academic personnel, degree programs, research funding) are currently the purview of other standing systemwide Academic Senate Committees, which are now charged with assessing these topics for all segments of the university. Establishing and sustaining appropriate coordination and consultation with these committees would be challenging within the usual operating environment of the systemwide Academic Senate. Although acknowledging potential challenges such as these, most Workgroup members believe that the benefits of establishing a new standing DANR committee are sufficiently great to recommend that it be established.

Faculty on each campus, where AES and CE activities occur are encouraged by the Workgroup to establish Academic Senate mechanisms, if they do not already exist, in order to participate locally in shared governance of the AES and to interface with the systemwide Academic Senate on broader DANR issues.

The Workgroup has the firm opinion that DANR should undergo the same process of external review of its OR funded activities to which any UC Multicampus Research Organization is subject. These periodic external reviews can only strengthen DANR and decrease the degree of insulation from the remainder of the University. The same review procedures and period that apply to MRUs should be used for DANR. A copy of the existing University Guidelines for MRU Quinquennial Reviews and an excerpt from the University Policy are presented in Appendix H. Like all MRU reviews, the DANR review should be conducted by the Vice Provost for Research in coordination with the Academic Senate. The new DANR Academic Senate committee should have input to the review process.

There are some key issues that deserve careful evaluation by the external reviewers and by the new standing committee or subcommittee. First, there should be a rational policy established concerning the use of eleven-month versus nine-month AES Faculty appointments. Also, the use of OR funds and the ratio of AES versus I&R salary support for Faculty requires a clear policy. AES Faculty should be treated fairly with respect to each other and with respect to the UC Faculty, in general. The Workgroup believes that the historical distinctions cannot presently be justified for a large number of AES Faculty.

The DANR three-tier professional scientist structure (AES Faculty, CE Specialist, and CE Advisors) may have outlived its usefulness. The populations of those three groups are making vital contributions to the DANR mission but have substantial overlaps in their capabilities and

their functions. Many land-grant universities thrive with a two-tier system that essentially equates to AES Faculty plus County Advisor interacting directly. This method of organization should be carefully evaluated by the external reviewers and the standing committee. With regard to this issue as well as many other DANR issues, the standing committee and the external reviewers should seek broad input from the non-Senate DANR academics (CE Specialists and Advisors). It should be understood that a change to a two-tier system can be accomplished by reclassification without release of personnel.

The Workgroup is especially concerned about the prescribed boundaries for substantial Faculty contribution to the DANR mission. The state, UC in general, and DANR would benefit considerably from a less restrictive entry for Faculty participation. The diverse UC community can provide many new concepts and fresh methodologies. It is not healthy to have guaranteed or nearly guaranteed research support for a limited group of UC Faculty while severely restricting entry to that group by Faculty outside of five select schools and colleges. It is difficult to argue that the best individuals to contribute to the DANR mission are coincidentally so limited to these five academic units. While minor DANR programs for broad involvement of UC Faculty do exist, major programs are needed.

The Workgroup is especially sensitive to the plight of the Natural Reserve System. It is a vital research, educational, and cultural enterprise that deserves more attention and resources.

There were varying viewpoints heard by the Workgroup on the DANR organization structure. A recent major re-organization has occurred. The Workgroup believes that the re-organization should be allowed to mature as conceived. Regular examination of the structure and its impact on DANR operations should be examined by the external reviewers and the standing committee.

As a consequence of our deliberations, the following twelve specific recommendations are forwarded.

1. A formal Academic Senate mechanism for consultation by the DANR Vice President with the UC Faculty must be identified immediately.
2. A Special Committee of the Academic Council should be established for a three-year period to enhance communication with DANR, providing an advisory and shared governance role equivalent to that found normally in other segments of UC. DANR should be requested to identify a high-level administrator to serve as the liaison with this committee.
3. This DANR Special Committee should consist of one representative each from UCAP, UCORP, and UCPB and one AES Faculty representative from each of the three campuses, specified as follows: The representatives from the three AES campuses should be connected to their campus Academic Senate's committees, or their College Executive Committee. The representative from Berkeley should be the Chair of the Faculty of the College of Natural Resources (or the Chair's chosen representative). The representative from Davis should be the Chair of the Faculty of the College of Agricultural and Environmental Sciences (or the Chair's chosen representative) or the Chair of the Faculty of the School of Veterinary Medicine (or the Chair's chosen representative). The Riverside Division will be represented by an AES faculty member chosen by the Riverside Division. The DANR Special

Committee should also consist of three other faculty members who are not AES Faculty or members of these other committees (UCAP, UCORP, or UCPB), for a total of nine members. The three (Academic Senate) committees should choose their representatives.

4. The AES Faculty on each of the three campuses should have a campus Academic Senate committee or structure to provide locally for shared governance of AES management and to interact with the systemwide DANR committee (or subcommittee).
5. An external review of DANR's activities should begin as soon as possible, hopefully in less than one-year's time from now. Existing procedures for MRU reviews should be applied with the additional constraint that the new DANR Special Committee plus local AES-Faculty committees should become involved.
6. External review should occur regularly on a five-year cycle. Normal UC criteria for research quality and impact should be used for evaluating the DANR/AES research contributions. The Academic Senate's new systemwide DANR Special Committee plus relevant standing committees should make inputs on the criteria for evaluating the impact of the DANR outreach.

By action of the Academic Council, the recommendations and concerns contained in the following items 7 through 12 will be addressed by the Special Committee and the external review, when established.

7. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the need for profound distinctions in the treatment of AES Faculty from other scientists at UC. For example, should dual-fund salary support be continued for new AES Faculty? Furthermore, the new systemwide standing committee (or subcommittee) should identify mechanisms whereby OR financial support (not including faculty salary) for applied research can be placed into a competitive grant program available to support all UC faculty.
8. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the need for a three-tier professional scientist structure in DANR. For example, should UC move to the two-tier professional structure that exists in agricultural programs at many other land-grant universities?
9. Mechanisms to broaden the UC community of major research contributors to the DANR mission should be created. These mechanisms should not be limited to minor programs. If as a consequence, AES Faculty must compete more intensely for OR funding, that would be healthy for the state and for UC. DANR should make formal outreach efforts to UC Faculty on non-AES campuses.
10. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the budget and the management of the Natural Reserves System.
11. Systematic efforts are required to enhance budget and staffing of the Natural Reserve System to enhance its utilization and to permit achievement of its operational goals.

12. The new systemwide standing committee (or subcommittee) and the external reviewers should examine the successes, problems, and impacts of the recent re-organization of DANR. Recommendations should be made about desirable adjustments to procedures, policies, and management structures.

Any one office or entity cannot implement all twelve recommendations. The first three recommendations concerning faculty consultation can be implemented by the Academic Council with the cooperation of the Vice President for Agriculture and Natural Resources. The fourth recommendation also concerns faculty consultation and is intended for the Chancellors, relevant Deans, and the Academic Senate leadership at Berkeley, Davis, and Riverside. The fifth through eighth recommendations concerning external review are directed towards the UC Provost and the Academic Council. The seventh and eighth recommendations are also directed towards future external reviewers and other Academic Senate Committees involved in any future external review of DANR. Recommendation nine should be considered by the Office of the President, the Chancellors, the Vice President for Agriculture and Natural Resources, and the Academic Council. Recommendations ten through twelve are intended for external reviewers, relevant Academic Senate Committees, the Vice President for Agriculture and Natural Resources, and the President. Clearly, the complex decentralized DANR organization can only be impacted through the cooperation of many offices and faculty representatives.

V. GLOSSARY

<p>AES - Agricultural Experiment Station. Funded by state OR and federal funds</p> <p>ANR - Agriculture and Natural Resources</p> <p>CAES - College of Agricultural and Environmental Sciences, UC Davis</p> <p>CE - Cooperative Extension</p> <p>CNAS - College of Natural and Agricultural Sciences, UC Riverside</p> <p>CNR - College of Natural Resources, UC Berkeley</p> <p>Cooperative Extension Advisors - County-based academics who develop and deliver practical solutions for local problems</p> <p>DANR - Division of Agriculture and Natural Resources</p> <p>DBS - Division of Biological Sciences, UC Davis</p> <p>FTE - Full Time Equivalent</p> <p>Hatch Funds - Federal funding for land grant institutions to support agriculture related research activities</p> <p>I&R - Instruction and Research</p>	<p>NRS - Natural Reserve System</p> <p>OR - Organized Research</p> <p>Regional Director - Administers research and extension programs in one of the four State DANR Regions (Northern, North Central, South Central, Southern)</p> <p>REC - Research and Extension Centers - Composed of 10 field stations that provide researchers with diverse field conditions</p> <p>SSPP - Statewide Special Programs and Projects</p> <p>SVM - School of Veterinary Medicine, UC Davis</p> <p>USDA - United States Department of Agriculture</p>
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APPENDIX A

UC Academic Senate Division of Agriculture and Natural Resources (DANR) Workgroup

Charge
July 6, 1998

In as much as the UC Division of Agriculture and Natural Resources (DANR) encompasses research and public service activities that are integral to the mission of the University of California, the UC Academic Senate Division of Agriculture and Natural Resources (DANR) Workgroup shall recommend ways to build relationships, communication, and mutual respect between DANR and the Academic Senate. The Workgroup shall work cooperatively with DANR leadership, who have expressed full support for this collegial endeavor. The resulting final report and recommendations shall be submitted to the Academic Council Chair by the end of the 1999 calendar year.

The specific topic(s) and workplan shall be determined after a series of preliminary meetings of the Workgroup and DANR senior administrators and representatives. The topics and workplan shall be mutually agreeable to DANR and the Academic Council. The Workgroup shall establish its own modus operandi that will include ongoing engagement both with DANR and with the University Committee on Academic Personnel (UCAP), the University Committee on Planning and Budget (UCPB), and the University Committee on Research Policy (UCORP), the systemwide Senate committees whose responsibilities connect most directly with DANR.

Workgroup Members:

Aimee Dorr, Academic Council Chair
Anthony W. Norman, UCAP Liaison
William Sirignano, UCPB Vice Chair
Wesley Wallender, UCPB Member
Tony Yaksh, UCORP Liaison
Allen D. Zych, UCORP Chair

Specific Topics and Workplan for DANR Workgroup
September 30, 1998

In consultation with DANR leadership and representatives at the Office of the President and on the campuses, the Workgroup shall develop a set of proposals for enhancing shared governance between the Academic Senate and DANR, primarily at the systemwide level and secondarily at the divisional level. The proposals shall address both the main areas of DANR operation (agriculture and natural resources) and the Natural Reserve System, which reports to the DANR Vice President. Specifically, the Workgroup report shall address the following three areas:

1. Topics about which there could be routine consultation of UCOP DANR with systemwide Academic Senate committees, where the topic and the relevant committee(s) are identified and there is some discussion of whether the consultation is on a regular basis (e.g., annually for the budget, quinquennially for MRUs) or on an action basis (e.g., as for CCGA, whenever a new graduate degree program is proposed). For each recommended consultation, the Workgroup should provide some indication of why it is warranted, its likely benefits, and the extent to which DANR leadership supports it.
2. Topics about which there could be routine consultation that is best handled at the campus level, with some explanation of why this is so. Depending on the Workgroup's time and inclination, it may or may not elaborate on the topics, consultative divisional Academic Senate committees, and consultation process.
3. Special topics that UCOP DANR and the systemwide Academic Senate should consider pursuing, where the topic and the relevant committee(s) are identified. A rationale for pursuing each topic should be provided. (Sample topics mentioned during the Workgroup's early meetings include the role of DANR at UC Merced, how to enhance the teaching and research functions of the Natural Reserve System, how to assure that all UC faculty could learn about DANR grant programs in a timely fashion, and whether aspects of DANR should be treated as an MRU.)

With staff support from the Academic Council office and ongoing engagement from DANR, the Workgroup will set its own timetable of meetings and report writing. Workgroup members agree that an early activity will be consultation with DANR faculty, CE specialists, and administrators at UCD and UCR. (UCB faculty, specialists, and administrators were consulted during the preliminary meetings of the Workgroup.) Workgroup members, representing UCAP, UCORP, and UCPB, will consult regularly with their committees. The Council Chair will join Workgroup meetings as possible and remain available for consultation. Workgroup members recommend that the Workgroup Chair be (TBD from among the Workgroup members). Sometime between February 1999 and June 1999 at the latest, the Workgroup will provide an oral or written progress report to the Academic Council. The final report will be submitted to the Council Chair sometime between July 1999 and the end of December 1999 at the latest.

APPENDIX B

WORKGROUP MEMBERS

William Sirignano, Workgroup Chair
Dept. of Mechanical Engineering
University of California, Irvine
1998-99 UCPB Vice Chair

Wesley Wallender
Dept. of Land, Air & Water Resources
University of California, Davis
1998-99 UCPB Member

Tony Yaksh
Dept. of Anesthesiology
University of California, San Diego
UCORP Liaison (1997-98 member)

Allen Zych
Dept. of Physics
University of California, Riverside
1998-99 UCORP Chair

Anthony Norman
Dept. of Biochemistry & Biomedical Sciences
University of California, Riverside
UCAP Liaison (1997-98 member)

Aimee Dorr
Dean, Graduate School of Education
University of California, Los Angeles
1998-99 Academic Council Chair

INTERVIEWEES:

Meeting of July 14, 1998
University of California, Office of the President

Henry Vaux, Associate Vice President
DANR

Garrison Sposito, Professor
Environmental Science, Policy, and Management
College of Natural Resources
University of California, Berkeley

Richard Standiford, Associate Dean and CE Specialist
Dept. of Forestry
University of California, Berkeley

Sharon Fleming, Associate Dean
Research and Extension
College of Natural Resources
University of California, Berkeley

Kim Rodrigues, County Director
Humboldt and Mendocino Counties

Meeting of September 23, 1998
University of California, Office of the President

W. R. Gomes, Vice President
Agriculture and Natural Resources University of California

Alex Glazer, Director
Natural Reserve System

Lawrence Hershman, Vice President
Budget, University of California

Meeting of November 20, 1998
University of California, Riverside

Michael Clegg, Dean
College of Natural and Agriculture Sciences
University of California, Riverside

Allyn Smith, Director

DANR Programs
Southern Region

Irwin Sherman, Chair
Academic Senate
University of California, Riverside

**Letter dated January 7, 1999 from the Academic Council Chair
to AES Appointed Faculty inviting their comments/recommendations
(Copy attached)**

**Meeting of February 5, 1999
University of California, Davis**

Barbara Schneeman, Dean
College of Agricultural and Environmental Sciences
University of California, Davis

Mark McNamee, Dean
Division of Biological Science
University of California, Davis

**Meeting of March 5, 1999
University of California, Office of the President**

Gordon Rausser, Dean
College of Natural Resources
University of California, Berkeley

Sharon Fleming, Associate Dean
Research and Extension
College of Natural Resources
University of California, Berkeley

Don Dahlsten, Associate Dean
Student Affairs and Instruction
College of Natural Resources
University of California, Berkeley

Dick Malkin, Associate Dean
Microbial Biology
College of Natural Resources
University of California, Berkeley

Rick Standiford, Associate Dean and CE Specialist
Dept. of Forestry
College of Natural Resources
University of California, Berkeley

W. R. Gomes, Vice President
Agriculture and Natural Resources
University of California

Meeting of April 23, 1999
University of California, Office of the President

Bennie Osburn, Dean
School of Veterinary Medicine
University of California, Davis

A. Charles Crabb, Director
DANR Programs
South Central Region

Meeting of May 28, 1999
University of California, Irvine

Discussion of Final Report

June 9, 1999 Academic Council Meeting

Interim Report presented by William Sirignano, Chair
DANR Workgroup

Meeting of September 15, 1999
University of California, Office of the President

W. R. Gomes, Vice President
Agriculture and Natural Resources
University of California

DOCUMENTS DISTRIBUTED TO WORKGROUP

Agenda Attachments for July 14, 1998 Meeting:

DANR at a Glance

Challenge of Change

Flow of Funds AES & CE for Fiscal Year June 30, 1997

Research and Extension Centers Booklet

UC Division of Agriculture and Natural Resources Statewide Programs (December, 1995)

NRS General Information Booklet

NRS Guide & Site Descriptions, September 1998

NRS Systemwide Office and Reserves—Current Baseline Operating Budget

Correspondence regarding the administrative location of NRS

Correspondence and reports associated with the DANR Report prepared by the 1996-97 UCORP

- 1997-1998 UCORP Responses to DANR/President Atkinson Responses to 1996-97 DANR Report (May, 1998)
- 3 letters
- 1996-97 DANR Report, including attachments
- Vice President Gomes' response to the UCORP report, including attachments
- Vanderhoef report, including committee roster

Materials Distributed at the July 14, 1998 Meeting:

DANR Strategic Planning, Division of Agriculture and Natural Resources, January, 1997

Program Priorities, Division of Agriculture and Natural Resources, January 1998

The Status of CE Specialists, September 1996

Valuing UC Agricultural Research and Extension, Agricultural Issues Center, Pub. No. VR-1

Agenda Attachments of September 23, 1998 Meeting:

DANR - Summary of Funds Available for Research

1998-99 Budget Information: a) Capital Improvements; b) Current Operations

Topics Identified 7/14/98 as Possible Focus

AES Appointees (Approximate) at UCB, UCD, and UCR

DANR Administrative Handbook, Academic Personnel

APM Policies for Cooperative Extension Specialist Series: a) UCOP; b) UCB; c) UCD; d) UCR

UC Davis Review Guidelines for Academic Federation Series, includes:

- Continuing Education Specialist
- Agronomist (in the AES)
- Cooperative Extension Specialist/Specialist in Cooperative Extension
- Specialist Series

Materials Distributed at September 23, 1998 Meeting:

UC Academic Senate/DANR Charge dated July 6, 1998
Figure 1 - Agricultural Experiment Station - Flow of Funds, Fiscal Year 6/30/97
Figure 2 - Cooperative Extension - Flow of Funds, Fiscal Year 6/30/97

Materials Available for Review at September 23, 1998 Meeting:

UCD 1998-99 Supplementary Guidelines: Academic Federation Series
UCD Merit Increase and Promotion Call for Academic Personnel - June 26, 1998
UCR Academic Personnel Review Procedures 1998-99

Agenda Attachments of November 20, 1998 Meeting:

Charge
Blueprint for a New Structure, DANR, Sept. 24, 1998
By-Laws: UCAP, UCPB, UCORP

Materials Distributed at November 20, 1998 Meeting:

(Distributed by Allyn Smith, Southern Regional Director)
California Agriculture
Region Identification Map
Collaborative Work Between Advisors and Academic Senate Members
Fund Source, Southern Region - Fiscal Year 1997-98

Materials Sent December 17, 1998 by Priority Mail:

Kay Harrison Taber, Special Assistant to the Vice President, E-mail Memo dated 12/4/98
Contracts & Grants Funding Sources (CE and AES)
Contracts & Grants Sponsors for Southern Region (from Allyn Smith)
DANR Mission Statement
ANR Report containing final Blueprint

Agenda Attachments of February 5, 1999 Meeting:

AES Faculty E-mail Letter from the Council Chair & Responses received to date
DANR Career Employees by Job Group - Divisionwide

Materials Distributed at February 5, 1999 Meeting:

UC Davis Biological Sciences, Vol. 6, No. 3

Agenda Attachments of March 5, 1999 Meeting:

Appendix A - Dean Schneeman's overhead slides
Appendix B - Dean McNamee's overhead slides
Letter to the DANR Workgroup from Dean Schneeman dtd 2/10/99

1993 Academic Plan (currently under revision), College of Agricultural & Environmental Sciences dtd 10/25/93
1993 Strategic Plan, College of Agricultural & Environmental Sciences dtd 4/28/93
AES Criteria for APM, UC Davis
CE Criteria for APM, UC Davis
11-month Term Agreement for Faculty hires with an AES Appointment, UC Davis
Website for Current Academic Planning Process
College Brochure - *Celebrating 90 Years of Service*
Composition of the Career Staff Workforce at The University of California by Race and Sex,
dtd Nov. 1998

Materials Sent March 17, 1999 by Priority Mail:

Kenneth R. Farrell letter to Chancellor Tien, dtd 12/17/93
Vanderhoef Report and attending documents
Academic Plan of the College of Natural Resources (UC Berkeley)
The Institute for Natural Resource Systems: Principles, Policies, and Guidelines for Allocating Resources (CNR, UC Berkeley)

Agenda Attachments of April 23, 1999 Meeting:

Member Input for the Final Report

Materials Distributed at April 23, 1999 Meeting:

Dean Osburn's overhead slides
DANR Proposed Report Outline
DANR Workgroup Proposed Findings and Recommendations

Materials Distributed at May 28, 1999 Meeting:

UCB CE Specialists Grant Information
UCD CE Specialists Grant Information
UCR CE Specialists Grant Information
Collaborative Research Programs, Southern Region

Materials Distributed at September 15, 1999 Meeting:

The New DANR Mission-Based Organizational Structure, December 3, 1998
Chancellor Greenwood/King/Gomes ltr dtd 4/19/99 re NRS funding
VP Gomes/King ltr dtd 4/23/99 re budget issues re NRS
Natural Reserve System Fiscal Reviews Committee Final Report of January, 1998

APPENDIX E

WORKGROUP MEETING AGENDA

- 1) Meeting of July 14, 1998
- 2) Meeting of September 23, 1998
- 3) Meeting of November 20, 1998
- 4) Meeting of February 5, 1999
- 5) Meeting of March 5, 1999
- 6) Meeting of April 23, 1999
- 7) Meeting of May 28, 1999
- 8) June 9, 1999 - Interim Report Presented to The Academic Council
- 9) Meeting of September 15, 1999

UC Academic Senate
Division of Agriculture and Natural Resources (DANR) Workgroup
Meeting of July 14, 1998, 9AM to 3PM
Room 5331, UC Office of the President, 1111 Franklin Street, Oakland

1. Introductions

2. General Overview of DANR

(about 1 hour)

- Henry Vaux, Associate Vice President, DANR

3. AES Appointments, Extension Specialists, and Extension Advisers

(about 4 hours including lunch)

- Garrison Sposito, Professor, Environmental Science, Policy, and Management, College of Natural Resources, UCB
- Richard Standiford, CE Specialist, Forestry, UCB
- Kim Rodrigues, County Director, Extension Adviser, Humboldt and Mendocino Counties
- Sharon Fleming, Associate Dean, College of Natural Resources, UCB
- Henry Vaux, Associate Vice President, DANR

4. Workgroup Discussion

(about 1 hour)

- What have we learned?
- What more do we want to know and how do we want to find out about it?
- How should the proposed agenda for the second meeting be revised?
- Will we need a third preliminary meeting?
- What are possible topics for 98-99?

Materials Distributed with Agenda

1. DANR at a Glance
2. Challenge of Change
3. Flow of Funds AES & CE for Fiscal Year June 30, 1997
4. Research and Extension Centers booklet
5. UC Division of Agriculture and Natural Resources Statewide Programs (December, 1995)
6. NRS general information booklet
7. NRS Systemwide Office and Reserves -- Current Baseline Operating Budget
8. Correspondence regarding the administrative location of NRS
9. Correspondence and reports associated with the DANR Report prepared by the 1996-97 UCORP
 - 1997-1998 UCORP Responses to DANR/President Atkinson Responses to 1996-97 DANR Report (May, 1998)
 - 3 letters
 - 1996-97 UCORP DANR Report, including attachments
 - Vice President Gomes' response to the UCORP report, including attachments
 - Vanderhoef report, including committee roster

Please review the DANR Directory to get a sense of the people and places in DANR. The Directory website address: <http://danr.ucop.edu/danrdir/>

Notice of Meeting
Wednesday, September 23, 1998
9:00 a.m. to 3:00 p.m.
UC Office of the President
Room 5331
Oakland, California

AGENDA

Enclosures

- I.** DANR
(about 2 hours)
W. R. Gomes, Vice President, DANR
Possible topics include:
DANR's main challenges
How to evaluate DANR's success
Comparison of ANR units at UCB, UCD, and UCR
Existing funding pools (and how funds in each are awarded) **1**
Flow of extramural funds to campus ANR units
- II.** Natural Reserve System
(about 1 hour)
Alex Glazer, Director, NRS
- III.** DANR in the UC Budget, Legislature, and State **2**
(about 1 hour, over lunch)
Larry Hershman, Vice President, Budget
- IV.** Workgroup Goals and Plan **3**
(about 2 hours)

Materials Distributed with Agenda:

1. DANR - Summary of Funds Available for Research
2. 1998-99 Budget Information
 - a. Capital Improvements
 - b. Current Operations
3. Topics Identified 7/14/98 as Possible Focus
4. AES Appointees (Approximate) at UCB, UCD, and UCR
5. DANR Administrative Handbook, Academic Personnel
6. APM Policies for Cooperative Extension Specialist Series
 - a. UCOP
 - b. UCB
 - c. UCD
 - d. UCR
7. UC Davis Review Guidelines for Academic Federation Series, includes:
 - a. Continuing Education Specialist
 - b. Agronomist (in the AES)
 - c. Cooperative Extension Specialist/Specialist in Cooperative Extension

- d. Specialist Series
- 8. Revised Roster
- 9. Travel Information/Map

Review Copies Available at Meeting:

UCD 1998-99 Supplementary Guidelines: Academic Federation Series

UCD Merit Increase and Promotion Call for Academic Personnel - June 26, 1998

UCR Academic Personnel Review Procedures 1998-99

DANR WORKGROUP

Notice of Meeting

Friday, November 20, 1998
10:00 a.m. to 3:00 p.m.
UC Riverside University Club
Side Room E&F
Riverside, California

AGENDA

- I. Michael T. Clegg, Dean
College of Natural & Agriculture Science
University of California, Riverside**
- 10:00 a.m. to 10:30 a.m. Presentation
10:30 a.m. to 11:30 a.m. Question/Answer Period
- II. Allyn D. Smith, Director
DANR Programs, Southern Region**
- 11:30 a.m. to 12:00 Noon Presentation
12:00 Noon to 12:30 p.m. Question/Answer Period
- III. General Discussion**
- 12:30 to 1:00 p.m.
- IV. Executive Session**
- 1:00 p.m. to 3:00 p.m.

Agenda Enclosures

1. Charge approved by Council
2. *Blueprint for a New Structure*, DANR, Sept. 24, 1998
3. By-Laws:
 - University Committee on Academic Personnel (UCAP)
 - University Committee on Planning and Budget (UCPB)
 - University Committee on Research Policy (UCORP)

Administrative Enclosures

1. Senate Travel Information
2. UCR Campus Map
3. Directions and Parking

DANR WORKGROUP
Notice of Meeting
Friday, February 5, 1999
10:00 a.m. to 3:00 p.m.
University Club, Lounge Room
Davis, California

AGENDA

- I.** Barbara O. Schneeman, Dean
College of Agricultural and Environmental Sciences
University of California, Davis
- 10:00 a.m. to 10:30 a.m. Presentation
10:30 a.m. to 11:30 a.m. Question/Answer Period
- II.** Mark G. McNamee, Dean
Division of Biological Sciences
- 11:30 a.m. to 12:00 Noon Presentation
12:00 Noon to 1:00 p.m. Question/Answer Period

WORKING LUNCH 12:00 - 1:00 p.m.

III. General Discussion

1:00 p.m. to 1:30 p.m.

IV. Executive Session

1:30 p.m. to 3:00 p.m.

Agenda Enclosures:

1. Minutes, November 20, 1998 Meeting
2. Dean Osburn Letter
3. AES Faculty E-mail Letter from the Council Chair/Responses received to date
4. DANR Career Employees by Job Group - Divisionwide

Administrative Enclosures:

1. Senate Travel Information
2. UCD Campus Map
3. Directions and Parking

DANR WORKGROUP

Notice of Meeting

Friday, March 5, 1999

10:00 a.m. to 4:00 p.m.

Conference Room 6113, Office of the President

Oakland, California

AGENDA

I. Gordon Rausser, Dean

College of Natural Resources

University of California, Berkeley

Sharon Fleming, Assoc. Dean, Nutrition Science

Don Dahlsten, Assoc. Dean, Insect Biology

Dick Malkin, Assoc. Dean, Plant and Microbial Biology

Rick Standiford, Assoc. Dean, Forestry

10:00 a.m. to 11:00 a.m. Presentation

11:00 a.m. to Noon Question/Answer Period

LUNCH 12:00 - 1:00 P.M.

II. W. R. Gomes, Vice President

Department of Agriculture and Natural Resources

1:00 p.m. to 3:00 p.m. Discussion

III. Executive Session

3:00 p.m. to 4:00 p.m.

Agenda Enclosures:

1. Minutes, February 5, 1999 Meeting
 - Appendix A - Dean Schneeman's Overheads
 - Appendix B - Dean McNamee Overheads
2. Dean Schneeman's Ltr to Workgroup dtd 2/10/99
3. Academic Plan: College of Agricultural & Environmental Sciences dtd 10/25/93
4. Strategic Plan: College of Agricultural & Environmental Sciences dtd 4/28/93 (Working Draft)
5. Academic Personnel Manual, UC Davis dtd 10/20/98
 - UCD-334, Academic Personnel Manual - Appointment and Promotion: Specialist in Cooperative Extension Series
6. UCD College of Agricultural and Environmental Sciences Memo Re: 11-Month Term Appointment MOU dtd 7/14/95
7. *Celebrating 90 Years of Service*, UC Davis College of Agricultural & Environmental Sciences
8. *Composition of the Career Staff Workforce at The University of California by Race and Sex*, dtd Nov. 1998
9. Fishleder E-mail dtd 1/28/99 re DANR Workgroup

DANR WORKGROUP

Notice of Meeting

Friday, April 23, 1999

10:00 a.m. to 3:00 p.m.

Conference Room 11326, Office of the President

1111 Franklin Street

Oakland, California

AGENDA

- I. Bennie I. Osburn, Dean**
School of Veterinary Medicine
UC Davis

10:00 a.m. to 11:00 a.m. Presentation/QA

- II. A. Charles Crabb, Director**
DANR South Central Region

11:00 a.m. to Noon Presentation/QA

LUNCH 12:00 - 12:30 p.m.

- III. Executive Session**
12:30 p.m. to 3:00 p.m.

Agenda Enclosures:

1. Minutes - March 5, 1999 Meeting
2. Member Input for Final Report

Administrative Enclosures:

1. Senate Travel Information

DANR WORKGROUP

Notice of Meeting

Friday, May 28, 1999

9:00 a.m. to 2:00 p.m.

Room 536, Administration Building
University of California, Irvine

AGENDA

I. Discussion and Review of Final Report Draft

Agenda Enclosures:

1. Minutes - April 23, 1999
2. UCB Specialists Grant Information
3. UCD Specialists Grant Information
4. UCR Specialists Grant Information
5. Collaborative Research Programs, Southern Region
6. Response from South Central Director on Collaborative Research Programs

Administrative Enclosures:

1. Senate Travel Information
2. Directions and UCI Campus Map

MEETING ARRANGEMENTS

Meals: A Continental breakfast will be available in the morning. Lunch will be served in the meeting room.

Travel Voucher: You may now use a travel voucher from your local campus, or the enclosed UCB voucher. The completed and signed travel voucher with original receipts should be submitted to:

Bookkeeper
Academic Council Office
University of California
1111 Franklin Street, 12th Floor
Oakland, California 94607-5200
Account/Fund Number: J-430384-19900-3

DANR AREAS OF SPECIAL EFFORT³

Center for Pest-Management Research and Extension

The University has a strong commitment to address the many pest management questions facing California. The center offers statewide leadership and coordination for the extensive pest management work underway in the Division, helps identify emerging issues, and recommends short and long-term priorities for research and extension in this important area.

4-H Youth Development Program

From remote ranches in Modoc County to crowded inner-city housing projects in Los Angeles, the 4-H Youth Development Program helps 100,000 young Californians become responsible adults. The 20,000 volunteer leaders work closely with UC academic staff to make 4-H an exciting learning experience for young people. It involves youth in many stimulating newer Programs-science education, environmental awareness, and community service-as well as traditional agricultural and animal sciences.

Expanded Food and Nutrition Education Program

Over two decades this UC nutrition effort has helped more than 750,000 low-income Californians improve their health by improving their eating habits. Primary targets for this federally funded nutrition education program are low-income urban and rural families, immigrants, and pregnant teenagers. EFNEP teachers are compassionate and caring. Coming from the target audiences, they have strong community roots.

Other DANR Programs focus on areas of special concern identified by the California Legislature or U. S. Congress; these include the following.

Agricultural Issues Center, bringing together experts from many disciplines to provide a useful focuses on significant public policy-related problems.

Agriculture Personnel Management, fostering sound personnel management practices in California agriculture.

Aquaculture and Fisheries, stimulating research and educational programs in water plants animals and fisheries important to California.

Center for Cooperatives, helping California's 30,000 rural and urban cooperatives grow and prosper.

Farm Safety, helping farmers and workers reduce accidental deaths and injuries on California's farms.

Genetic Resources Conservation, working to conserve the state's biological diversity.

³ This information was obtained from the University of California Web site: <http://danr.ucop.edu/>

Giannini Foundation, encouraging development of useful information in agricultural economics.

Integrated Hardwood Range Management Program, helping Californians preserve the elegant native oaks that are a hallmark of the state.

Integrated Pest Management, helping farmers manage pests with economically and environmentally sound agricultural practices.

IR-4, generating registration data for minor crop use of pesticides (a federally funded program).

Kearney Foundation of Soil Science, conducting research in soil, water and plant sciences.

Mosquito Research, conducting research to help control mosquitoes and mosquito-borne diseases.

Pesticide Impact Assessment, generating benefit assessment data on registered pesticides.

Pesticide Information and Coordination, acting as liaison between UC and state and federal agencies for pesticides.

Renewable Resources Extension, assessing educational needs for managing California's forests and range lands.

Salinity/Drainage Research, focusing on drain-water problems in the San Joaquin Valley.

Sea Grant Extension, developing solutions for marine-resource concerns in California.

Elvenia J. Slosson Endowment, providing support for work in environmental horticulture.

Small Farm Center, supporting limited-resource farming efforts.

Sustainable Agriculture Research and Education Program, helping agriculture move toward environmentally sound and economically successful production systems.

Urban Garden Program, increasing the food self-sufficiency of low-income people in Los Angeles.

Water Resources Center, stimulating research on the intelligent use of the state's water resources.

Wildland Resources Center, focusing on the conservation, management, and use of wild lands.

ADMINISTRATIVE POLICIES AND PROCEDURES CONCERNING ORGANIZED
RESEARCH UNITS

(Approved by the Council of Vice Chancellors for Research, 4/21/99)

EXCERPT

PROCEDURE FOR FIVE-YEAR REVIEW

10b. MRUs. Periodic reviews of MRUs are necessary to ensure that the research being conducted under the units' auspices is of the highest possible quality and that University resources are being allocated wisely and in line with University priorities. Each MRU should be reviewed at intervals of five years or less by an *ad hoc* review committee, appointed by the Vice Provost for Research from a slate nominated by the Chair of the Academic Council and the Chancellors or Chancellors' designees. The Quinquennial Review Committee should include at least one member from outside the University and may include one or more Vice Chancellors for Research from within UC. The review should address all the criteria and areas identified with reference to ORUs in Section 10a. The Vice Provost for Research should assure that the quinquennial review of each MRU takes place at regular five year intervals. The review report is given to the Director for information. Each Quinquennial Review Committee should consider and make specific recommendations, if appropriate, for improvements in the mission, budget, administration, FTE or other resources, research focus, and programs and activities of the unit. It should also consider whether the unit should merge with another similar unit, or be disestablished. Justification for continuation of an MRU must be carefully documented by the review committee.

The Five-Year Review report is submitted to the Vice Provost for Research, who distributes it to the Academic Vice Chancellors for campus comment and the Chair of the Academic Council for comment by UCORP, UCPB, and CCGA. The MRU Director and the Chair of the Advisory and Executive Committees may also comment on the Five-Year Review Report. Based on the Five-Year Review Report and the comments on the Five-Year Review Report, the Vice Provost for Research approves continuation of the unit, implements changes in the structure or functioning of the unit, or recommends disestablishment of the unit to the President.