

## **Section I - Current Status and Progress toward 2007-8 Goals:**

### **Introduction:**

The College of Agricultural Sciences and Natural Resources (CASNR) educates students for careers in agriculture, natural resources, and many other allied high demand areas. Resources devoted to teaching are leveraged since the majority of teaching faculty hold joint appointments with the Tennessee Agricultural Experiment Station (TAES), which allows them to include cutting edge science into the curriculum. Many of the CASNR graduates immediately enter into the careers and others continue their education in graduate school or professional studies, such as law, medicine, dentistry, pharmacy, and veterinary medicine.

### **Progress toward 2007-8 Goals:**

- Stabilize undergraduate enrollment and increase graduate enrollment

As a result of aggressive recruitment efforts conducted at the college and department levels, the undergraduate enrollment has increased from 841 in 2006 to 858 in 2007. Graduate enrollment has increased from 225 (MS=154, PhD=71) to 243 (MS=165, PhD=76) during the same time frame, but still remains a challenge in programs where the industry and professional demand for students completing undergraduate degrees competes with recruitment for graduate school.

- Diversify the student body, faculty, and staff

Total minority student undergraduate enrollment in CASNR is up from 2.2 percent in fall 2003 to 7.4 % in fall 2007 (up from 6.2% in fall 2006). Enrollment of all racial and ethnic groups enrollment is seen. It should be noted that total enrollment also increased between fall 2006 and 2007, so minority student enrollment represents a real increase in representation by the various racial and ethnic minorities tracked. The faculty profile has not changed over the past 12 months; those with CASNR appointments are 19.8% female, 8.9% Asian, 2.0% African American, and 1.0% Hispanic. There are more faculty of color in the departments; however, they do not have CASNR appointments.

- Focus on contemporary land-grant academic programs

Several curriculum changes were presented by departments to the college for the 2007-2008 or future catalogs. Plant Sciences revised concentrations to add three – Bioenergy, Biotechnology, and Horticulture Science and Production. Agricultural Economics revised their major to Food and Agricultural Economics that reflects the broader global food system. They are also working on a THEC proposal for a Natural Resource and Environmental Economics major. Agricultural Science was revised to Agricultural Leadership, Education and Communication to recognize the growth in leadership studies in agriculture and natural resources.

- Continue resource reallocation to provide teaching FTEs where there is high need and areas of strength

As FTEs come open, lines are being consolidated to create two new 9-month, 100% CASNR positions – Agricultural Leadership (for fall 2008) and Landscape Architecture (for fall 2009 or fall 2010, depending on how quickly funds can be redirected). Agricultural Leadership is an emerging area with excellent career opportunities with commodity groups, trade associations, lobbyists, and companies seeking public relations personnel familiar with the agricultural or natural resource systems.

## **Section II – Academic Needs and Future Directions:**

### **Academic Needs**

Unlike many of the colleges at the University of Tennessee, CASNR faculty advise undergraduate students in their own programs of study. While this has contributed to our retention rate and overall high satisfaction of students with their academic majors, this does place a disproportionate burden on faculty with respect to release time devoted to teaching and academic support. When that advising time is added to the time spent supervising graduate students (see figure attached), most of our teaching faculty are spending far more time in teaching and related activities than their appointment allots. When one examines the distribution of CASNR FTEs for our faculty in the classroom during the 2006-7 academic year (see figure attached), 15 of our faculty who are teaching have no teaching appointment whatsoever indicating that teaching effort is being in part subsidized by the experiment station and extension appointments. In addition, three of our faculty have teaching appointments less than 10%.

CASNR is committed to using its financial resources wisely and effectively, leveraging support for our educational mission in many ways. We also actively seek to find lower cost alternatives to solve our needs. For example, in last year's budget request, an IT professional was sought. An alternative approach was taken since resources were not available to hire a full time IT professional. A graduate assistantship was developed to hire a student from communications with expertise in the IT area. Her responsibility is to develop recruiting materials on line with a focus on testimonials highlighting the many career opportunities for graduates of agricultural sciences and natural resources areas. She has been actively working with the UTIA communications group and has already produced a video walking tour of the agricultural campus and videotapes of many of our exemplary students as they have joined the professional world. Not only does she provide a lower cost alternative to an IT professional, but she also provides a fresh student perspective on recruitment.

### **Opportunities for Cost Effective Expansion and Response to Demand**

#### **Goals for 2008-9**

- Complete searches currently underway impacting CASNR with respect to teaching or administration

Currently, searches are underway for a Director of the UT Gardens, Assistant Professor for Agricultural Leadership, Professor and Head for Plant Science, Professor and Head for Biosystems Engineering and Soil Science, Professor and Head for Agricultural Economics, and Equine lecturer.

- Focus on recruitment and diversification of the student body

CASNR has just hired a Director of Recruitment with expertise in marketing and a family background in agriculture. We anticipate that this person, working closely with the department heads, program leaders, communications, and existing CASNR staff with responsibilities for retention and career development will be an asset to the recruitment efforts and will be able to impact our diversity. The dean also has contacts among the 1890 community (HBCUs), which could be used to enhance diversity of student body.

- Expansion of high demand, high impact program areas using concentrations

Concentrations have been developed or are in advanced stages of development for two high demand areas – bioenergy (Department of Plant Sciences, 2008-2009 catalog) and equine science (Department of Animal Science, future catalog). Other potential areas of program development are currently being assessed including biotechnology (cross-disciplinary thrust), and a Peace Corp Masters International program (effort led by Entomology and Plant Pathology but also with cross-disciplinary thrust).

- Examination of student learning outcomes at the program and course levels to ensure teaching effectiveness

In the Fall 2007, two teaching workshops were held. One focused on the use of technology to enhance teaching and learning and the other featured the well-known Dr. Mark Taylor who focused on teaching and learning from the standpoint of the net generation. The second workshop was generously co-supported by Dr. Robert Holub, Provost. We plan to offer another workshop on designing student-learning outcomes at the course and program levels and use that impetus to initiate an examination of what our program learning outcomes are and how we are evaluating them to ensure our effectiveness.

- Examination of teaching resources (FTE distribution and GTA allocation) to ensure cost effectiveness

CASNR has initiated an audit of its GTA resources to determine how they are being used and whether this is the most effective way to use them. We will also be examining distribution of teaching FTE allocations across programs and departments so that, as retirements, separations, and other opportunities to reallocate occur, we can place those FTE resources in areas where there is high demand or insufficient support to meet current needs.

### **Section III – Budget Request and Rationale**

- Partial support (60%) for an Assistant Professor in the Turf Grass Program

Currently, the highly successful turf area is being supported by one turf professor with only a 40% teaching appointment. With this release time, he teaches three turf courses, mentors six graduate students, advises 30-40 turf undergraduates, and serves as the faculty mentor for the Turf Club. More calls are received from potential employers of our turf students than we have turf students to supply. The demand greatly exceeds supply and this trend is forecasted to continue. Other universities has invested heavily in their turf programs such as Kentucky (with 0.75 FTEs for about 30 students), Eastern Kentucky (with 1.0 FTE and about 40 students), Arkansas (3 faculty in turf with teaching appointments and about 30-40 students), Georgia (just over one FTE and about 40 students), North Carolina State (five faculty with teaching appointments with about 120 students), Mississippi State (2.1 FTE for 87 students), and UT Martin (1.0 FTE for about 20 students). Compare these levels of support and students with that of UTK at 0.4 FTE for about 35 students. The potential to grow this program is enormous and

we currently lose many of our Tennessee students interested in turf to programs in other states (e.g., at Mississippi State, one third of their students are from Tennessee).

- Partial support (25%) for an Assistant Professor in the high demand Equine Program

The state of Tennessee ranks third in the US for the number of horse farms. Development of a concentration in Equine Science provides a strong opportunity to increase enrollment in this area. When the University of Kentucky initiated such a concentration, they had 60 applicants in only the first year. Based upon this trend and the numbers of inquiries experienced concerning the equine studies available, an increase in 30-50 students could be expected reaching 120 to 200 students at the end of four years. The additional faculty with expertise in animal physiology, nutrition, genomics, and other research core strengths would provide allied support not only for teaching in the concentration area, but also for an active research thrust. No other equine concentration in the state could offer such breadth and educational foundation.

- Partial support (25%) for an Assistant Professor in the emerging Bioenergy Program

In the fall of 2008, the Department of Plant Sciences will be offering the first undergraduate concentration in Bioenergy, an area that has tremendous potential for expansion and collaboration not only among the colleges at UTK but also with ORNL. Currently, resources are being provided to develop the bioenergy industry and provide for a faculty research base. With a modest investment for a teaching appointment, this focus on bioenergy could provide additional enrollment and provide a means for those interested in being employed by the industry to obtain the education and retooling necessary to be successful.

- Teaching Associate (100%) for the Environmental Landscape Design Lab

There has been large growth in PLSC 280, the introductory landscape design course, most likely in response to the establishment of UT's new Masters of Landscape Architecture program. In spring, another section had to be added to respond to that demand. The teaching associate would take responsibility for the introductory course and also for teaching PLSC 220 Basic Landscape Plant Materials, a course required not only by students in the landscape and ornamental tracks, but also by students in our premier Public Horticulture program and often an elective for those in the Agricultural Education concentration of the recently revised and renamed Agricultural Leadership, Education and Communication major. Currently, the landscape design course is being taught by Professor Sam Rogers who is overextended due to the major service learning component provided by students in the PLSC 421 Native Plants and Landscape course. The active service learning component has received much publicity and acclaim for its impact in the community and to the environment.

- Director for Advising (100%)

There are two aspects to growing enrollment – recruitment and retention. Advising in CASNR is done in the departments starting with new student orientation through to graduation. CASNR does not have an advising center. CASNR does not have a Director for Advising. Adding a professional exempt-staff position for a Director for Advising would allow for increased training for all faculty advisors

- a more hands-on approach for mentoring new faculty advisors
- planning, conducting and coordinating new student orientation sessions (presently this is all done by an administrative assistant, exempt staff person)
- planning, conducting and coordinating a peer advisor/mentor program

- planning, conducting and coordinating special programs with the Agriculture and Natural Resources Learning Community
- intensifying special programs for students at risk
- providing more in-depth academic review/probation advising
- handling day-to-day matters related to advising
- implementation, coordination and review of the results of the on-line advising assessment system, when released to CASNR, and conduct other forms of assessment of the advising program

Therefore, a priority is funding for a Director of Advising in CASNR. The Director of Advising would also represent the college on the Advising Committee, Appeals Committee, and on other committees as appropriate.

- Budget Manager (100%)

Cost effective use of resources and appropriate reallocation to alleviate shortfalls in academic support require a high level of budgetary expertise. Management of these resources across seven departments and nine academic majors (10 if the new Natural Resources and Environmental Economics major is approved by THEC) requires close supervision to respond to events and opportunities that arise allowing reallocation to alleviate shortfalls or respond to high demand areas. Current budget management is being accomplished by the Accounting Specialist I and the Associate Dean, neither who are trained accountants. The Accounting Specialist I provides administrative support to the \$800,000, 100 plus accounts College Scholarship program. This has become a year-round job to monitor scholarship awards to maximize utilization of scholarship funds and access to CASNR programs.

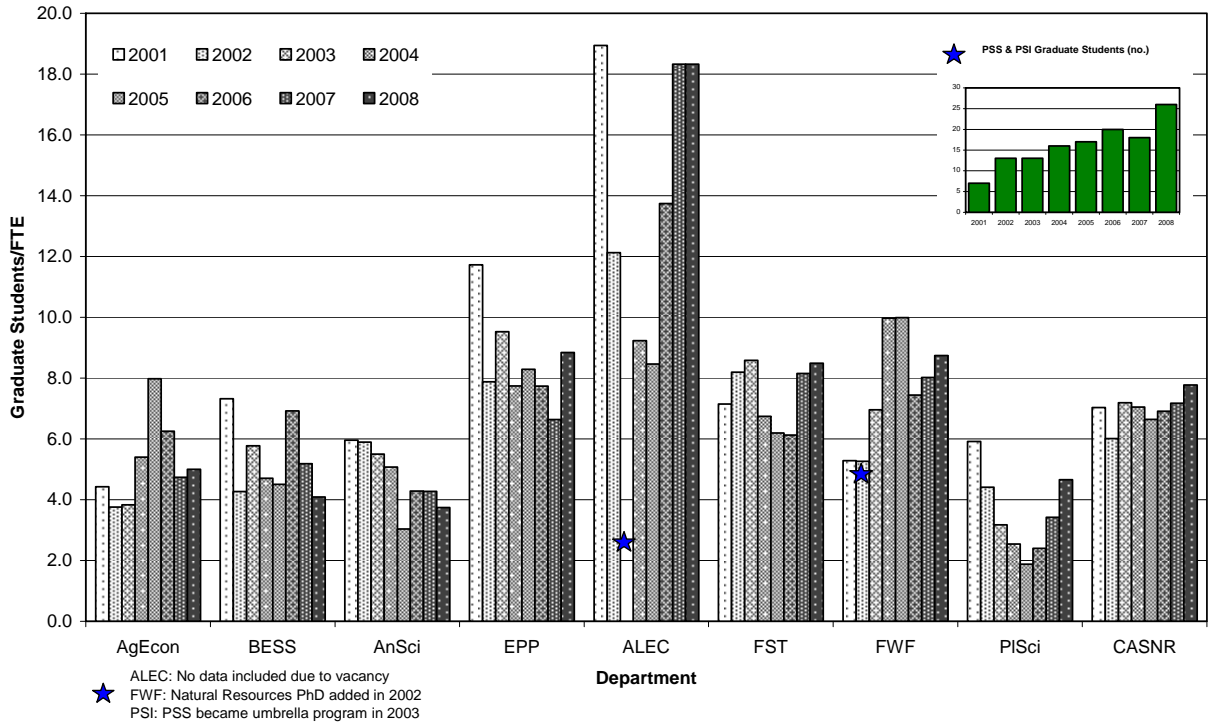
- Two Graduate Teaching Assistants to support general education courses in Environmental Sciences and Animal Sciences

ESS 210, Introduction to Soils, taken by most students in the college, is offered each semester and will be required for MLA students in year one of the three year professional track. Other ESS courses required in various majors include 324, 334, and 355. ESS 210 has been near or exceeded capacity each time it was taught since fall semester 2004. To increase access and avoid delay in graduation for students, we need to add lab sections to each semester. However, GTA funding is not available to offer additional sections of this course and maintain lab set-up assistance and oversight for the other ESS courses. At the present, one GTA is responsible for lab setup for all ESS undergraduate courses, teaching two lab sections for ESS 210, grading lecture exams in ESS 210, and assisting with proctoring exams in courses as needed. An emeritus faculty member "volunteers" his time, however, we cannot rely on this into the future. Therefore, we are requesting funding and fee waivers for two GTAs to assist this department in meeting its service-teaching load of ESS 210, 324, 334 and 355 in addition to the General Education courses ESS 120 and 220. Both of these courses are enrolled to capacity. Faculty are willing to increase enrollment in these two courses if they had additional GTA assistance for the service courses that have laboratory sections.

- Faculty Start-Up Funds

The requested \$20,000 will provide start-up funds for the four faculty positions: Agricultural Leadership (position supported through internal reallocation), and Turfgrass Science and Management, Equine Science, and Bioenergy (positions requested this fiscal year).

### Graduate Students per CASNR Faculty FTE



### Distribution of CASNR FTEs on UTIA Faculty in the Classroom During 2006-2007 AY

