

## **Center of Excellence for Poultry Science, Department of Poultry Science Response to Review Team Recommendations (June 3, 2005):**

It was apparent from the review team's comments that the Center of Excellence for Poultry Science is the world's premier program; nevertheless we want to continually strive for excellence and expand our capabilities and reputation. Below we outline the response of the Department of Poultry Science/Center of Excellence for Poultry Science to the review team's recommendations. We will first address the summary that is provided at the end of the review team's recommendations, and then address other recommendations made in the body of the document.

The department faculty met on April 14, 2005 and went over the review team's recommendations. The faculty and staff agree with the review team that ours is the World's premier Poultry Science program. The review team correctly recognized that the poultry sector sales in Arkansas (\$3,348,150,000 in 2003) accounted for half of all agricultural sales in the State. We agree with the review team that the preeminent value of poultry production to the state's agricultural base, coupled with the presence of internationally successful poultry agribusinesses headquartered in the State, provide a compelling rationale for continuing to expand the mission and influence of the Center of Excellence for Poultry Science. Accordingly, the Center's leadership and faculty intend to build on the momentum derived from this highly laudatory and successful review and will continue to work with administrators in the Division of Agriculture and the Arkansas poultry industry, to build upon our success: in order to guarantee our position the World's leading comprehensive program in Poultry Science.

We are pleased that the Review Team was impressed with the fact that the entire Center (staff, faculty and students) were very dedicated and had obvious feelings of being an important part of the Center's Programs. There was a great deal of camaraderie demonstrated in that the staff and faculty enjoyed working with each other, as well as with the faculty, students, and visiting scientists that come through the CEPS. It was gratifying to hear that the department leadership and faculty were to be congratulated on their staff selection and management practices. We hope to continue this type of interaction as we continue in our second decade since the Center was established.

### **I. Response to general recommendations:**

***Recommendation 1.** Long and Short-term planning for improvement of the three primary missions of the Center. (from page 18) The review team noted that CEPS has not addressed priorities for the replacement of faculty positions associated with future retirements. Some discussion of this should be incorporated into the strategic plan.*

**Response:** In a strategic planning session conducted last year, we developed strategies to improve our programs in research, teaching, and extension. In combination with recommendations provided by the review team, changes will be made to further strengthen the program. The recommendation to consider how we will replace positions when faculty retire is well taken. We previously had not considered this as we have been occupied with the problems of

filling vacant positions in an environment of budgetary constriction during the last 3 years. The strategic planning session focused mainly on our immediate needs (i.e. over the next 3 to 5 years). However, it should also be recognized that it is difficult to know if and when retirements will occur which may depend in part upon health issues, family issues, or other unforeseen circumstances. Having said that, we intend to work on a long-term strategic plan for the future development of the Center.

***Recommendation 2: Sharing of information within the department.***

**Response:** We believe that most of our faculty and students are well aware of activities within the Department and that we have a good record of sharing information. However, we recognize that we can continue to improve in this area. Examples of information sharing are two graduate student competitions in which graduate students (M.S. and Ph.D. candidates) are graded by faculty (from both within and outside the Department). These graduate student competitions are held in preparation for National meetings held in January and July each year. The student presentation competition is supported by funds generously provided by an alumnus, Dr. Tom Sullivan, that enables the Center to provide monetary awards to the students that receive first, second and third place ranking. We encourage faculty participation in these sessions. We will also look into the possibility of having an annual or semi-annual faculty retreat to not only share information about each program but also to undertake strategic planning sessions.

***Recommendation 3: Support Staff meetings.***

**Response:** The review team suggested that the support staff meet with CEPS administration to address ways to improve the work environment. This is a good suggestion that will be addressed fairly easily by initiating quarterly meetings with staff. We will need to determine if this will be the entire staff, or have representatives for staff (for example, farm workers, secretaries, accountants, research specialists). An advantage of including our entire staff will be that everyone has a chance to be recognized and their opinions heard.

***Recommendation 4: Support staff should be nominated for various awards.***

We have established a committee that will address this very issue. The committee consisting of faculty and staff (chaired by a staff member) has assembled a series of dates for nominations, and will solicit nominations for staff awards from faculty and staff.

## II. Academic Programs

**Recommendation 1:** *Involve more faculty in undergraduate recruiting, advising and extracurricular activities to increase numbers to 100 or more.*

**Response:** We are currently in the process of planning how to involve more faculty in the recruiting process. Our goal is to increase our student numbers by 10 students per year for the next three years, which should result in approximately 100 students in the program. We would like to graduate 20 – 25 undergraduate students in a 4 to 4.5 year period.

**Recommendation 2:** *Encourage Poultry Science majors to take poultry related minors such as Food Safety, Meat Science, and Business. These do not need to be official minors. They could be structured areas of emphasis set out by CEPS.*

**Response:** This is already being done by faculty advisors. Increased emphasis by advisors is a possibility.

**Recommendation 3:** *Develop and promote an attractive 15 hour Poultry Science minor that will attract students from other Ag majors, e.g. in Animal Science, Food Science, Economics, etc.*

**Response:** The minor is currently being revised as suggested, and will be submitted to the CAFLS Curriculum Committee in September 2005.

**Recommendation 4.** *Assign about 10 students to each advisor and match them based on common academic interest area.*

**Response:** Although the sentiment of the review team is appreciated, faculty are not in agreement that this recommendation is desirable. Faculty involved in advising have to be very dedicated to advising and need to act in concert with other advisors. Advisors may also specialize in certain types of advising, particularly in preparing students for various professional programs, which can result in an uneven distribution of students. There is an effort underway to expand the pool of departmental advisors, which will be important as student numbers increase. It is desirable at times to match students and advisors based on common interest areas, but students are able to switch advisors and advisors are similarly trained (with the exception of advising for entrance into professional programs) so in the opinion of the advisors matching is not critical.

**Recommendation 5:** *Increase the structure and visibility of the internship program to students and industry. Development of a brochure that describes expectations and benefits for students, employers, and the department would facilitate this. Emphasize internships as a recruiting tool.*

**Response:** Five years ago a brochure was developed to promote the internship program with industry. The results were an overwhelming response from industry for student participants. Unfortunately, student interest for internships remains limited for many reasons. These

include the need to attend summer school which limits the number of hours students can work or where the student can work as well as a lack of interest on student behalf for processing or live production experience. After being unable to provide industry with the number of interns they requested, it was decided to focus more on word of mouth with industry with regard to internships. Also students interested in summer interns are encouraged to submit resumes to the U.S. Poultry Student Career Program for the opportunity to interview for internships that might be available anywhere in the US. The internship program is introduced to the students in the Careers class and they are encouraged to visit with any of the professors about intern opportunities as well as fellow students who have participated in internships. Also, all internship opportunities provided by industry are promoted to the students through the Poultry Science club email network. The Poultry Science students receive adequate notification on the internship program. These suggestions will be taken under advisement. The effectiveness of internships as a recruiting tool is unknown, but may be effective for some target students. We feel that we have a very good internship program currently; many students participate in a variety of internships that in many cases are tailored to the student's particular interest.

***Recommendation 6:*** *Involve the Department Head to coordinate an expanded recruiting program/team that takes advantage of the extreme breadth of the CEPS faculty's scientific and academic expertise.*

**Response:** This has been initiated (5-23-05). A committee has been formed to look at ways of becoming more efficient and effective in our recruiting efforts. It is anticipated that more faculty will become involved and be drawn into recruiting activities as this committee becomes fully active.

***Recommendation 6A:*** *Focus recruiting program on forming relationships with teachers and counselors strategically positioned in selected "feeder schools" or areas.*

**Response:** Formal and informal activities to foster relationships with teachers and counselors have been underway for many years, but it is anticipated that a greater number of formal efforts will be made. For example, in June 2005 the department is hosting a two-day in-service event for high school agriculture teachers, and in July 2005 an activity will be offered for high school science teachers. These activities are designed to provide teachers with information about the department and field of poultry science, and to provide educational materials that may be used in high school classrooms.

***Recommendation 6B:*** *Use full scholarships as a recruiting tool to compete for outstanding students.*

**Response:** It is not known whether "full" scholarships will attract more top students into the program. Many of these students often have other scholarship opportunities, and "full" scholarships represent a tremendous expenditure of financial resources, which would reduce the number of students that could be funded within our departmental scholarship program. Without a very substantial (and sustainable) input of funds, devoting available resources to "full" scholarships would therefore likely decrease departmental student numbers. We can always improve the effectiveness with which we explain the benefits of the program to

students, teachers, and parents. Further discussion is needed to ascertain the best way to distribute scholarships with the goal of attracting more students into the program.

**Recommendation 6C:** *Extend recruiting efforts into contiguous states to take advantage of reciprocal tuition agreements that allow these students to pay in-state tuition at UA.*

**Response:** Considerable efforts have been and are being made to recruit students from contiguous states, especially targeting transfer students. This will continue to be an area of emphasis for the recruiting program. Also, we do have a cooperative agreement with Oklahoma State in which students can attend OSU for two years before transferring to the U of A on in-state tuition.

**Recommendation 7:** *Require graduate students to act as teaching assistants in all poultry course labs.*

**Response:** This was discussed in a faculty meeting. Although we will work on incorporating graduate students into the teaching program, it is felt that this is best accomplished on an informal basis. Graduate students will be encouraged to assist with teaching labs and possibly some lecture courses, but the faculty do not feel that it is in the best interests of the department or the graduate program to make this a requirement for graduate students. Some students may not be very good teachers and may not be interested in teaching, whereas others may be interested, but may not communicate well.

### **III. Extension Programs**

**Recommendation 1.** *Extension faculty should formally meet as a group frequently (monthly) to assess program activity in the near term. Planning and coordination will aid discovery of more effective and efficient utilization of programming resources (time). Mutual goal-setting and sharing of information will yield more valuable Extension programs.*

**Response:** We recognize and value communication within the Extension faculty. However, monthly meeting with Extension faculty have been attempted in the past without benefit. Nevertheless, the committee was correct in its suggestion that time must be effectively and efficiently utilized. We are currently exploring our options as to how Extension specialists can share information with a minimum impact on their already over-booked schedules.

**Recommendation 2A.** *Information provided to the review team estimates that Extension specialists spend an average of 67% (ranging from 47.2 to 84.8) of their time out of the office in support of field activities. Two important points are worthy of consideration;*

**Recommendation 2B:** *The level of field intensity of programming may be quite different among the faculty. For some specialists this level of work load is not sustainable long-term.*

**Response:** We recognize that there is a potential problem with burn-out if faculty are on the road most of the time. We are working with faculty to try to reduce their 'on-the-road workload', but this is not easy to do overnight. Faculty have become very successful and

have been recognized as a leader in their field and continue to get requests. It is difficult to rein in aggressive active faculty. Micromanagement of faculty may affect morale and productivity. The majority of the extension faculty have been in service for more than 8 years. If burnout were an issue, it would have already been a factor. Extension faculty did not complain about their workload but rather shared a great deal of enthusiasm with the review team regarding the work they are conducting. Miscommunication must have occurred in order that the review team came to the conclusion that burnout was likely in this group.

***Recommendation 2C:*** *The adoption of other recommendations may aid in bringing this into balance. Adoption of distance education technology will also provide some relief. The department needs to be sensitive to the potential for overload of some individuals and should foster cross-programming to share the load.*

**Response:** We will look at the possibility of incorporating more distance education technology into Extension activities. The Arkansas Cooperative Extension Service has purchased an on-line training program called Educator. Most Extension Poultry specialists have been trained on the use of Educator. We are currently developing Educator programs to provide county extension agents with poultry training. We will explore the use of Educator to address the educational needs of other audiences.

***Recommendation 3:*** *Addition of a faculty member with expertise in animal ethology should include a significant Extension appointment. Currently available funding sources will make it difficult for a person that does not have close linkages with the industry to successfully support a research program in this discipline.*

**Response:** We appreciate the comments made concerning a faculty member in behavior/ethology. When we advertise this position, we will certainly have a strong extension component in the job description. The actual final percent appointment will depend in part upon needs in the industry as well as the capability of the individual hired into that position.

***Recommendation 4:*** *In coordination with the undergraduate teaching program: Consider revitalization of the embryology program. Aim the curriculum at grades 6-12 developing age appropriate modules. Prepare materials for utilization by science and biology teachers. Provide training and support for a targeted group of young and motivated teachers. Link the program to the life science activities of departmental researchers. Utilize this program to recruit students to the department.*

**Response:** This is a good suggestion. We are currently discussing the possibility of developing teaching modules in embryology for grades 6 – 12 and are investigating similar programs in neighboring states for pointers. Also, we will be hosting 12 to 18 high school teachers this summer for a 2-day period. The teachers will be given some modules that they can use in their classroom while getting in-service training hours to meet the new state-mandated requirement.

***Recommendation 5:*** *Consider offering a means for undergraduate students to become HACCP certified. In many cases, this will increase their marketability.*

**Response:** We will encourage graduate students to attend HACCP workshops that are being provided periodically for the industry. We probably will do this with selecting or inviting students on a first come first served basis with one or two students being allowed to sign up per workshop. We will also have to determine how expenses for the workshop will be covered for these students.

#### **IV. Research Programs**

**Suggestion 1.** *CEPS should move forward immediately to replace the lost genomics position. (from p. 17) The CEPS currently has three open positions to make strategic decisions for the future of poultry research at the University of Arkansas. These positions are proposed to be in Food Safety, Animal Well Being/Behavior, and one in Basic Science. The review team has considered these areas carefully, in the context of the overall research program of the CEPS, the goals and function of the CEPS, and the success that could be achieved in future research. With that in mind the following is recommended: CEPS should take advantage of the opportunities associated with the sequencing of the chicken genome, and the fact that it has most of the basic equipment in place, to move forward immediately to replace the lost genomics position.*

**Response:** We agree that we should take advantage of information that is now available following completion of the avian genome: a genomics position would be in keeping with the spirit of the Animal Biotechnology Whitepaper. Commitment to this position and program will depend upon how other positions are filled. As much as we would like to do this right away, we believe we should see what happens with regard to the filling of one position with the endowed Food Safety Chair, and another position dedicated to Animal Behavior/Well-Being. If we fill these positions without a substantial increase in financial support for the program via the administration, we will be pushing the 80:20 barrier (i.e. 80 % salaries and 20% in maintenance and operation).

**Suggestion 2** *Significant opportunities exist for avian biotechnology to interface with the state's agriculture-medicine initiative, particularly with the application of avian transgenics in the production of bioactive and therapeutic proteins. It should be noted that several avian transgenic start-up companies in the US are actively pursuing this area and represent a additional niche for Poultry Science. CEPS should become more active in Avian Biotechnology. The white paper on the Assessment of Animal Biotechnology at UA included in the review documents sets the stage for a campus-wide program in Animal Biotechnology with the CEPS leading the way. Hence, the CEPS should become more active in Avian Biotechnology. A faculty position in avian transgenics is recommended (from p. 18).*

**Response:** This has already been addressed above.

**Suggestion 3:** *Although the laboratory facilities for a biotechnology initiative are superb, it was observed that additional bird facilities will be needed in order to accommodate biomedical and agro-medical research. The latter is particularly important since these areas will be heavily funded by Federal granting agencies.*

**Response:** We recognize that a transgenic type position could provide great opportunities for important research funding – and that this position will require substantial investment in infrastructure. We have reserve resources that could be used for construction of such a building, but this will deplete our current reserves that are earmarked for essential renovation of other farm facilities as well as for equipment purchases. If sufficient interest is generated in this position, it might be possible to seek private funding to construct a facility. This may be difficult to accomplish since private sources of funding have been extensively tapped to support development activity throughout the entire UA campus during the last 3 years.

**Suggestion 4:** *The review team views the Animal Well-Being/Behavior position less as a research area but one that may be appropriate for extension. The best means of addressing this issue for the industry lies with a good extension/applied research program.*

We certainly expect that the Animal Well-being/Behavior position will have an extension component but believe this should be integrated with a research and teaching requirement. A 3 way split in research, teaching and extension may be ideal for certain individuals, but would not work with others. The actual appointment will depend in part on the academic qualifications, interest and proclivity of the person that is hired.

**Suggestion 5:** *Food safety will continue to be a major research focus for CEPS, the acquisition of an endowed position in food safety could significantly strengthen the program. The CEPS is strongly urged to seek competitive candidates for one of the Walton Foundation Chair positions.*

**Response:** We agree with this recommendation. However, we also recognize that the successful candidate for the Food Safety chair position will have the option to decide in which department they wish to reside.

**Suggestion 6:** *Air, soil and water quality associated with intensive animal agriculture is a national issue, and is highly likely to become an even greater issue in the future. The CEPS should strongly consider bringing a nutritionist on board who would be assigned to work in the area of nutrient reduction in the waste stream of animals. The Review Team also encourages the CEPS faculty to become more involved with the National Center for Animal Waste Management and with the FASS Environmental Committee.*

**Response:** This suggestion is well taken as we do feel that environmental issues will become more and more important to the poultry industry. We do have nutritionists available that are working in areas of phosphorus and nitrogen metabolism. We will make every effort to integrate nutrition into our environmental research-extension programs and will encourage appropriate faculty become involved in the National Center of Animal Waste Management and with the FASS Environmental Committee. Dr. C. Maxwell (Professor in the Animal Science Department at the U of A) is a representative from the U of A on this committee.

**Suggestion 7:** *CEPS should consider a potential new model for the acquisition of faculty in high priority national funded areas. One possibility is through the hiring of Research*

*Assistant Professors. This should be considered for a proteomics position, and for other developing research areas for which it is expected that significant research funding will be available. This could lead to greater “critical mass” in basic research areas, while maintaining current faculty numbers and areas of expertise.*

**Response:** We certainly would be receptive to a new model for hiring faculty in high priority national funded areas using a non-tenure track Research Assistant Professor model. In discussions on this topic concern was expressed that faculty placed in a non-tenure track position in research might be viewed differently than tenure track research faculty. For one thing, it is possible that these people would be making extra effort to find employment elsewhere that would be tenure track. While the Center might benefit from having high caliber people in a Research Assistant Professor position, it is entirely possible that these people might leave in a short period of time (e.g. after 2 years) when they found a tenure track position at another university. If these people are brought in with a short shelf life (e.g. 4 years) regardless of how faculty felt about their capabilities, it is the opinion of the faculty in our department that these people would always see and think of themselves as being different from other faculty in the Center.

This is not to say that we would dismiss trying to hire someone in this category. Benefits to the Center would be enormous if we could get expertise in an area such as proteomics or functional genomics. If such persons were successful in obtaining grants, and his/her salary raises were similar to those found by the other faculty, then they might stay for quite a long time. However, if they were expected to generate their own funds for salary support, after a period of time it is likely that they will seek employment where salary support is provided by the institution.

### **Additional Recommendations by Review Team**

***Recommendation** (from p. 9): We encourage the Center’s administrators and faculty to establish some strategic national and international collaborations and/or Memoranda of Understanding that will bring about collaborative programs and the exchanges of faculty and/or undergraduate and graduate students.*

**Response:** We have opportunities to establish international collaborations with universities in Latin and South America as well as China. We will work to develop Memoranda of Understanding with a few select universities; especially those that may lead to outside funding to foster and facilitate collaboration.

***Recommendation** (from pg. 13): Efforts at funding additional scholarships to support increases in undergrad numbers and to compensate for tuition increases should be actively continued.*

**Response:** We are starting an aggressive campaign to increase the amount of scholarship support we can provide from the department.

### Extension Recommendations (from pg. 20-21)

**Recommendation:** *Deepen and strengthen involvement and networking with other agencies (Poultry and Livestock Commission, Dept. of Health, Environmental). Potential for greater involvement in policy development may exist, including participating in testimony to legislative committees. Coordination with University and Division activities of this type are essential. The Poultry Federation can be an asset and facilitator of these activities. Present level of such activities was not clear to the review team.*

**Response:** Brevity makes it difficult to include every detail of each program. The Extension Section already has significant involvement with the Arkansas Livestock and Poultry Commission, the Arkansas Department of Health and the Arkansas Department of Environmental Quality. In addition, the Extension Section is closely involved with The Poultry Federation. An Extension Veterinarian (Dr. F. D. Clark) indicates that besides connections with the ALPC and AR state veterinarian office, he has close connections with the similar entities in Oklahoma, Texas and Louisiana as well as with the USDA Area Veterinarian Office and the USDA Regional Preparedness Office.

**Recommendation:** *Document, discuss and disseminate the impact of programs. Expertise exists within the Extension faculty and departmental staff to do this with even greater intensity. Frequent updates of web-based program impact summaries should be developed to supplement the quarterly newsletter. Make certain that all stakeholders are fully informed of the impact of unit activities.*

**Response:** The committee is correct in its observation that impacts need to be communicated to stakeholders. However, it should be recognized that the Extension Section enjoys its present success BECAUSE impacts have been communicated informally. Nonetheless, the committee is correct that a more formal reporting of program impacts would strengthen the program. Plans are underway to address this need.

**Recommendation:** *Watch for the development of barriers to cooperation. A young department has the luxury of not having a divisive departmental culture to overcome – don't let one start. Don't let small incidents become the basis for a reduction of involvement and cooperation with researchers – deepen and strengthen these relationships. Do not neglect opportunities to cooperate with ARS and CEPS researchers.*

**Response:** The review team is exactly right with their assessment of our program. We still are a relatively young program and do not have a divisive program at this time. We will foster cooperation and collaboration of faculty in the Center but recognize that external situations out of our control may begin to foster problems between faculty. We will work hard to prevent these problems from occurring.

**Recommendation:** *Utilize every opportunity to network with Extension faculty in other states. The poultry industry is not confined to state borders. Poultry integrators exist in multiple states and should be receiving a coordinated extension program effort in many areas. Poultry*

*Extension specialists throughout the poultry producing regions of the country should view themselves as a single national program. We are one team.*

**Response:** The Extension Section already has significant interaction with extension faculty in other states and frequently works with integrators in multiple states. In addition, the Extension Faculty has discussed regional and national cooperation extensively. Although it is a noble thought to think of Extension Poultry specialists having a single national program, significant problems exist with this approach, not the least of which are monetary. In view of the fact that the salaries of Extension Specialists are largely paid by tax monies from the state of Arkansas, we believe that our first responsibility is to address the needs of the citizens of the state. Additionally, in some cases comparable extension programs in certain areas may not exist in other states; e.g. there are no poultry extension veterinarians in the states of TX, OK, MO, KS, LA, and TN.

**Recommendation:** *Costs should never be the sole factor to consider but knowing the real costs of program activities can aid in prioritization of programming activities. Fees associated with educational activities should consider all costs. Examine opportunities to utilize distance education technology when it truly enhances the program. Due to the monetary and time costs associated with the development of distance education programs, extension should really work to coordinate and share the efforts developed at the different land-grants.*

**Response:** The cost of each extension program has already been examined and the fees assessed cover all costs. The possibility of using distance education to enhance programs is presently being explored.

**Recommendation:** *Addition of a faculty member with expertise in animal ethology should include a significant Extension appointment. Currently available funding source will make it difficult for a person that does not have close linkages with the industry to successfully support a research program in this discipline.*

**Response:** The committee has correctly assessed the situation with regard to the animal ethology position.

**Recommendation:** *Limit involvement with non-avian species (rabbits, cattle, swine). A lower priority for these activities will yield additional time for more productive programs. Cross-species activities should be a 2-way street.*

**Response:** We recognize the difficulties associated with involvement with non-avian species. However, we should recognize that this observation applies in large part to the Extension Veterinarian, who is a very honest, diligent, and competent individual, who (like all other licensed veterinarians) took the oath listed below. Discussions with the Extension Veterinarian about this situation were initiated a long while ago. These discussions revealed that he takes the veterinarian's oath VERY seriously and views refusal to treat sick or injured animals as a violation of that oath. Directing the Extension Veterinarian to be involved with

only avian species would be tantamount to directing him to violate his oath and could lead to his departure from the section. Efforts continue to address the situation.

### **Veterinarian's Oath**

Being admitted to the profession of veterinary medicine, I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health, the relief of animal suffering, the conservation of livestock resources, the promotion of public health and the advancement of medical knowledge.

I will practice my profession conscientiously, with dignity and in keeping with the principles of veterinary medical ethics.

I accept as a lifelong obligation the continual improvement of my professional knowledge and competence.