Extension Education: Symposium: Has the Land Grant College Left the Farm?

32 Why there is less applied agricultural research conducted at land grant colleges. R. L. Plain*, *University of Missouri*, *Columbia*.

Over the past 20 years, there has been a steady shift in the type of research conducted by colleges of agriculture at land grant universities, away from applied research and toward basic research. There are two primary reasons for this shift. First, formula funds available through USDA have held constant, more or less, for much of this period. Thus, the purchasing power of these federal dollars has shrunk by the rate of inflation. This has forced researchers to increasingly rely on competitive grants for funding. By their nature, competitive grants tend to be more oriented to basic research. The second reason for the shift away from applied research relates to changes that have taken place in agriculture. Farms have gotten much bigger. For land grant universities to do many types of applied research, they need facilities and equipment comparable to those used by producers. This is particularly a problem for applied livestock research, where replicating the production systems used by modern swine and dairy firms can be quite costly.

Key Words: Research, Land Grant, Funding

33 What I did when I had an extension\research appointment and what I do now: How times have changed. R. L. Nebel*, *Select Sires Inc.*, *Plain City, OH*.

For 22 yrs I had an extension\research appointment first at North Carolina State University and then Virginia Tech. My appointment and performance expectations changed from 100% extension to 75% extension 25% research. Additionally, for 16 yrs I taught an applied reproductive management class in the associate degree program and during my last 5 yrs I taught a senior level physiology of reproduction class. Extension focus at the county level switched to specialized multi-county or regional area dairy agents of which there are currently three. I was the major advisor to fifteen MS students with most doing large field studies to obtain data to answer their thesis objectives. Funding for applied field studies in the area of reproduction of dairy cattle was and still is difficult to obtain. In 2005, I started my present position as senior reproductive and herd management specialist at Select Sires Inc. My primary responsibility is to elevate the reproductive expertise of all Select Sires member cooperatives and international distributor personnel and develop programs to ensure Select Sires is the recognized industry leader in applied reproductive management programs at the producer level. To conduct workshops on basic AI training, advanced AI training, herd management evaluation, synchronization and heat detection protocols, herd record analysis using on-farm records and the RePRO Analysis™ program, and on-farm consulting with dairy producers and their employees on reproductive and herd management issues. The objective of my presentation is to compare and contrast my career paths as a reproductive specialist in academia and now in the AI industry.

Key Words: Extension Education, Applied Reproduction, AI Industry

34 Serving the beef industry by re-defining your comfort zone. M. Siemens*, *Cargill Meat Solutions*, *Wichita, KS*.

In planning a career everyone makes decisions how best to obtain the desired outcomes, including the sort of job one wants to do until they retire. Dr. Siemens earned a Ph.D. in ruminant nutrition with the objective of finding a job supporting the beef industry through a university extension position. Such a position was obtained. After 10 years in academia an opportunity arose which allowed Dr. Siemens to seek new challenges outside of academia, so he left his university position for one in industry. Seeking the ability to have a broader impact Dr. Siemens found himself in industry working in animal welfare, beef procurement, swine procurement, beef/pork/turkey marketing, process verification, beef/pork/turkey retailer/foodservice support, biotechnology and other industry issues. Not too much on the pure ruminant nutrition side of the business anymore, and all areas where Dr. Siemens had limited formal training. To be successful and valuable to the livestock industries Dr. Siemens has had to re-define his comfort zone from ruminant nutrition to a variety of subject matters where expertise was needed. This has required him to obtain knowledge and information from a variety of sources and to find ways to generate new knowledge when gaps existed. Sources have included university extension, but also other academics as well as colleagues in industry. Generation of new knowledge within industry has proven invaluable to him as a source of continuing professional development. The new knowledge is neither peer reviewed nor shared widely (i.e. in scientific journals), which is different than that generated through the Land Grant system. It is, nonetheless, extremely valuable to those with access to it.

Key Words: Extension, Production Research, Industry

35 A transition from extension-research to industry swine genetics. W. O. Herring*, *Smithfield Premium Genetics Group*, *Rose Hill, NC*.

Much like the way of poultry, over the last 15 years, swine production has shifted to an integrated, contract production model. Today, the top 20 pork producers in the U.S. account for approximately half of the sow herd inventory. All of those top 20 producers currently have employees that are licensed veterinarians, nutritionists, physiologists and/or geneticists. Because of more homogenous production systems, scientists at these companies provide the technical assistance directly to growers where in the past that assistance was provided by Extension. These scientists can also focus on problems that improve production and reduce costs associated with those businesses. Their research is either generated internally, or they seek out those research programs at universities or other technology companies with whom they can collaborate to answer specific questions. If university research programs lose touch with the specific needs of these livestock producers, their research programs may not provide a benefit to improving livestock food production. A more specific example in livestock genetic improvement is emerging. Over the past fifteen years, research funding in genetics has shifted away from quantitative genetics to almost completely molecular strategies. However, we have struggled to come up with sweeping examples of how molecular-based genetic improvement has significantly improved livestock production over the last decade. While this has brought in

large grant dollars with attractive overhead for universities, it in turn has yielded a shortage of qualified, young scientists adequately trained with state-of-the-art quantitative genetics skills. While some have argued that nearly all of the needed research has been done utilizing quantitative strategies for livestock improvement, we have much research underway with our datasets for problems that have not yet been addressed in the literature. With a continually shifting U.S. livestock production paradigm, those businesses, researchers, universities and policy makers will have to openly communicate to maintain appropriate research priorities.

Key Words: Extension, Swine, Genetics

36 Why our farm is supporting MS research programs for the University of Illinois. B. F. Wolter*, *The Maschhoffs Inc.*, *Carlyle, IL*.

For over a century, the Land Grant Extension System has created and disseminated knowledge throughout agricultural industries. The utilization of such knowledge has resulted in significant improvement in the biological efficiency of animal production systems. Arguably, Extension's applied science-based research is an important catalyst to increasing animal performance through development of management strategies on the basis of quantified improvements in genetic makeup of animals, facility design, animal health, and nutritional programs among other factors. Such factors differ among modern animal production systems; therefore, specific research programs focused on system level improvement of biological output are increasingly necessary. The importance of observing science-based principles in study design, analysis, interpretation of results, and a systems-based approach to implementation remains constant among the changes in animal production. Moreover, a multi-disciplined approach involving the use of scientific results found in literature, as well as careful observations made by trained scientists within practical animal environments proves effective for providing incremental improvements in biological efficiency. Ultimately, this approach enhances profitability of animal production systems in competitive business climates. To that end, the Maschhoffs collaborated with the University of Illinois over the last decade to apply such an approach; the efforts resulted in science-based animal management strategies that increase its competitiveness within the pig production sector. Moreover, future scientists and managers are trained collaboratively through the research-based program, and these individuals are likely candidates for providing the leadership to the future of the pig industry. The Maschhoffs experience suggests careful consideration of the objectives in both private industry and public Land Grant Institutions, on behalf of the collaborative parties can provide a closer alignment of interests leading to definitions for the program. Resulting programs may provide for a long-term model for innovating today's animal production sector.

Key Words: Extension, Research