

An Aristocracy of Talent

Dr. C. Wayne Smith, Interim Department Head

According to E.T. York, Chancellor Emeritus of the University of Florida, suggested that the Land Grant University was the most original and distinctive contribution that the United States has made to higher education. Let's consider that statement for a moment. At the founding of this country, the European model of higher education was the right of the aristocracy and generally unavailable to the common person. Thomas Jefferson noted the need of educating the common man to create an aristocracy of talent instead of an aristocracy of inherited power. Educated elites were inconsistent with the land of opportunity and a young nation that required fresh ideas and ingenuity to offset a lack of manpower. By the mid 1800s, there were concerns that opportunity, responsibility, and privilege should be shared and were not a right of inheritance. Jefferson and Jackson and Lincoln, as well as others, understood that an educated populace would build factories, roads, communication systems, and produce an agricultural industry that would provide food and fiber for all. So the idea of providing a university education in the Agricultural and Mechanical Sciences began to take shape very early in our Nation's history.

Significant steps toward that goal began when Jonathan Baldwin Turner, Professor at Illinois College, in the 1830s proposed "state sponsored universities" to educate and serve the "industrial class." Justin Smith Morrill and Benjamin

Wade co-sponsored federal legislation in 1859 that would provide federal assistance to states to help establish Turner's universities but President Buchanan vetoed the bill because of mounting tensions dealing with state's rights. In 1862, Congress again passed the Morrill Act and this time President Abraham Lincoln approved the legislation. This proved to be a bold and revolutionary idea; a contract between the federal government and the people to create a non-traditional university, a "peoples" college to provide an education that

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focused on the "several pursuits and professions of life." And this is what we still do today, i.e., train an aristocracy of talent dealing with natural resources, food, feed, and fiber production.

In 1887, the Hatch Act was passed by Congress that "charged" these colleges with conducting research and experimentation in the public interest. Then in 1890, a second Morrill Land Grant Act established a system of historically black Land Grant



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An Aristocracy of Talent *Continued*

Universities or insured that existing Land Grant Universities offered unhindered admission of minorities. The Smith-Lever Act(s) directed that LGU take its programs to all citizens through the Cooperative Extension Service. (This act also created the tripartite partnership between the Federal Government, the State Governments, and local County Governments in funding the Cooperative Extension Service). The latest legislation dealing with LGU was in 1994 when legislation chartered and funded 29 tribal colleges for Native Americans and afforded them LGU status.

We are a Land Grant University because in 1862 the Federal Government was engaged in a Civil War and money was scarce, but land was abundant. Thus, the Morrill act provided a given acreage of federal land per Congressional Representative of a state. The land could then be sold by the state to create an endowment to support the Land Grant college. The Morrill Act of 1862 applied, obviously, only to those states not in rebellion. The act was extended to southern states after the war and in the 1870s, Texas was granted land script, i.e., the promise of land in the territories. Texas was awarded 180,000 acres which it sold for 96.7 cents per acre to produce an endowment of \$174,000 to establish Texas A&M University, a Land Grant University charged with teaching the Mechanical and Agricultural sciences, along with military tactics. The Department of Soil and Crop Sciences, and Texas A&M University are charged with developing an aristocracy of talent, conducting research for the public good, and extending that research information to the public. It is a long and proud history.

Dr. Terry Gentry
Asst. Professor,
Soil & Aquatic
Microbiology



Dr. Kurt Steinke
Asst. Professor,
Turfgrass Ecology



New Departmental Faculty

Dr. Terry Gentry, Ph.D. from the University of Arizona, started working in the Soil & Crop Sciences Department January 1, 2006. He even started working earlier than agreed upon to help the department with a heavy teaching load. Terry currently teaches AGRO 455, an upper level undergraduate course in Environmental Soil Science. "During the course, students are first presented with the chemical, physical, and biological processes controlling the fate and transport of pollutants in the soil/water/air continuum. These principles are then used to design and evaluate strategies to prevent and/or treat several types of contamination from agricultural, municipal, and industrial sources of pollution."

His research focuses on the development and use of molecular technologies to enhance the detection and remediation of environmental contamination. This includes the detection and identification of microbial pathogens from animal, human, and natural sources and also the characterization of microbial populations and communities contributing to applied remediation processes such as the bioremediation of organic and metal contaminants.

Dr. Kurt Steinke started working in the Soil and Crop Sciences Department, April 1, 2006. He received his Ph.D. from the University of Wisconsin-Madison in 2006. Dr. Steinke's research will focus on the biology, management, and ecology of plant communities within the urban/suburban environment and what effects these systems have on the soil and surrounding areas within the shifting urban landscape. This includes urban water and nutrient management, sustainability, cultural management, soil amendments, and best management practices promoting the judicious use of water and nutrients within turfgrass, native, and agricultural ecosystems in order to sustain and improve soil quality.

He will teach AGRO 428, an upper-level undergraduate course. "It deals with turfgrass culture, ecology, and physiology. It will be designed to teach students how to apply concepts in plant growth and development, physiology, and the soil-plant continuum to experiences they will encounter upon graduation. The course will also prepare students for

some of the environmental, social, and political issues that exist in the area of urban agriculture."

Improving Water Quality at the Local Level

Texas is an intensely urban and an intensely rural state, with more than 80% of the state's population residing in 20 of the state's 254 counties. Much time and expense has been devoted to reducing water quality problems associated with urban areas, with the emphasis primarily on industrial concerns and automobile emissions. Rural Texans, who control most of the land in the state are less informed about practices that they can do to improve the quality of our streams, rivers and lakes. The Soil and Crop Sciences water quality team, working in cooperation with the Texas State Soil and Water Conservation Board and local partners including the Plum Creek Conservation District and the Guadalupe-Blanco River Authority initiated a project designed to help local citizens protect their water resources. The project is being piloted in the Plum Creek Watershed, which is located in Hays and Caldwell Counties. Over 115 citizens attended three public information and education meetings held in Lockhart, Luling and Kyle. Surveys indicated that participants gained knowledge and awareness about their watershed and existing water quality concerns. Also, 28 individuals committed to serve on the watershed Steering Committee to coordinate development of the Watershed Protection Plan that will be the guide for implementing programs to improve and protect water resources in the region.



Plum Creek at Soda Springs, Texas.

To begin plan development, the Plum Creek Watershed Steering Committee has established five workgroups: 1) Urban Stormwater-Nonpoint Source, 2) Agricultural Non-point Source, 3) Wastewater Infrastructure, 4) Outreach and Education, and 5) Water Quality and Habitat. The groups will meet in July to evaluate available data and identify significant data gaps. A plan for additional water quality monitoring including seasonal sampling at 20 locations within the watershed, along with two more routine sampling locations will begin in July. This additional monitoring will support a better understanding of pollution sources, and assist in targeting the most effective locations for implementing Best Management Practices (BMPs).



Texas A&M University and the Department of Soil & Crop Sciences are passionate about agriculture. We know the world is about balance. Our daily challenge is to merge science, new technology and natural resources together for the sake of humanity. If you like the idea of making our world a better place, contact Mark Hall, Undergraduate Advisor, mhall@ag.tamu.edu, for more information about your future possibilities.

Through enhanced stakeholder involvement in development of a Watershed Protection Plan, the Plum Creek Watershed Partnership promotes a sustainable, proactive approach to improving water quality at the local level. The program will be a model for voluntary water resource stewardship, and results from this effort will guide future programs to make landowners and volunteers more aware of management decisions and their impact on water quality. For more information about the Plum Creek Watershed Partnership, please visit the website at <http://pcwp.tamu.edu/default.aspx>.



Drought Stricken Crops and Kids at Stiles Farm Field Day, June 20, 2006.