

Range Master of Agriculture Internships Lead Students to Rewarding Careers

Wayne T. Hamilton

Problem solving in agriculture and natural resource management is a complex process involving technical knowledge, a broadly based education and, equally important, experience. More than a decade ago, Texas A&M University developed a master of agriculture program, with a required internship, to prepare professional agriculture managers and leaders. In the Department of Range Science, the degree program can be directed toward emphasis in ranch management and several areas of rangeland resource management. Academic courses are selected from a wide range of interdisciplinary studies to give the student technical as well as management background. The internship of work in a related industry allows the student to gain experience and develop professional skills on the job.

Degree requirements include 40 semester hours of graduate level credits, 12 hours of which must be taken outside the student's major field. Additionally, completion of a professional internship of at least 6 months duration is required in an area of industry related to the student's career interests. Students receive credit for the internship upon submission of a professional paper. A second paper is also required that deals with solving a specific problem related to their work.

Students in M.Agr. degree programs are supervised by an advisory committee composed of members of the graduate faculty. Advice frequently is obtained from employers prior to and during the internships concerning course selection for students. Employers also rate the student's performance during his or her work experience. Students are required to pass an oral examination after meeting all other requirements of the degree.

One of the most attractive features of the M.Agr. degree is that the program focuses on a management orientation rather than the traditional, research-related direction of an M.S. degree. Another attraction is that each degree program can be tailored to fit the student's specific career objectives. This includes a significant on-the-job management experience where students learn the feel of the "real" world. Supervision of the student's internship is by a practicing professional who can add a dimension of reality to decision making processes observed by and participated in by the intern.

A strong requirement for *experience* has been a consistent factor in job opportunities. The M.Agr. gives students an opportunity to gain experience and build managerial expertise. The amount of experience accrued during the internship is not sufficient, certainly, to build a professional employee, but it does provide a "track record" in the industry. It also shows that the student possesses basic skills and

has become aware of current problems and opportunities in the business. The internship also can provide potential employers with a reference on the student from within the industry, and often results in important contacts not otherwise possible for the student.

The Department of Range Science at Texas A&M has graduated M.Agr. students with a variety of career interests. Perhaps the best way to describe the degree program and several of its advantages is by looking at some of the recent graduates and their internships, as well as their post-graduate employment.



Tim Fitch, a 1979 range M.Agr. graduate, feeds hay to Beefmaster cows on the Martinez Ranch, which he manages, near McLean, Texas.

Tim Fitch received a B.S. degree in range science in 1977, and immediately started a M.Agr. degree program. He completed the required on-campus course work for the degree in May 1978 and began a professional internship on the 35,000 acre Harrell Ranch near Claude, Texas. Tim's internship was completed in April, and he graduated in May 1979.

Tim is now the ranch manager of the 10,000 acre Martinez Beefmaster operation near McLean, Texas. His comments about his internship are similar to those of other students. "I learned a lot about things on the ranch by actually doing them. There is a difference between knowing what to do and how to do it. Some things require experience that you just don't get in the classroom."

An important concept of an internship paid off for Tim. "I had a chance to grow into responsibility rather than getting it dumped on me. The employer and his staff gave me jobs to

do on my own, but they were there to answer questions when I needed help. This gave me time to learn before I went out where I was totally responsible for a job."

As do many other M.Agr. students, Tim believes that the extra 2 years beyond the bachelor's degree helped him to develop professionally. "I don't feel I would be as prepared to do the job I have now if it were not for my additional course work and the internship, although I had worked on ranches before. I matured a lot and understood more at the end of my M.Agr. program."

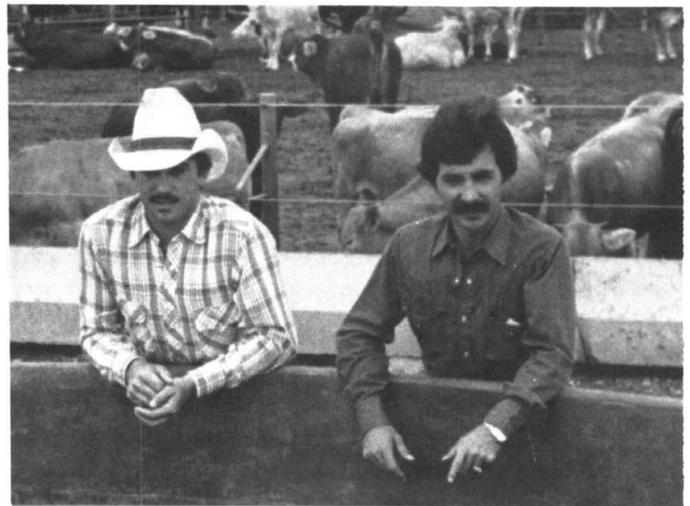
The Martinez Ranch has 2 cell-type, short duration grazing systems that were installed on about 2,200 acres after Tim began the job. The ranch also uses a microcomputer for inventory and accounting processes.



Alan Koemel, a 1980 range M.Agr. graduate, observes range condition improvement on the Harrell Ranch near Claude, Texas. The Harrell Ranch has provided internships for two M.Agr. students.

Alan Koemel completed his M.Agr. degree with an emphasis in ranch management in May of 1980, and also did his internship on the Harrell Ranch. Alan returned to work for the ranch after graduation and recently began managing his own ranch near Stephenville, Texas. He recalls that the internship helped him to "learn what will work in a given situation." Alan said "exposure to the employer, his staff and neighbors all helps to broaden the student's perspective of the ranching business. It helps to be able to do things for the first time or two while an experienced hand is looking on. They know you are a student and need to learn."

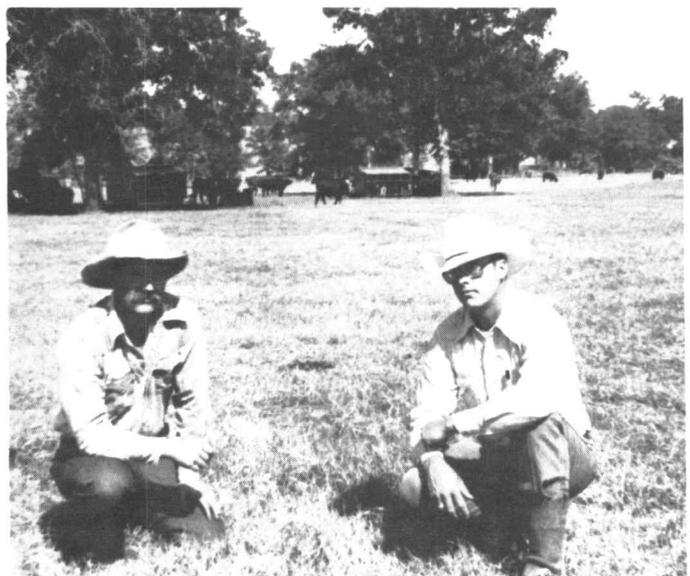
The M.Agr. degree in range science can be directed, with course work and the internship, toward a variety of range-related career choices. Francisco Elizondo used his M.Agr. degree to enter a multifaceted career. Francisco received a B.S. degree in agricultural economics from Monterrey Tech in 1976, and his M.Agr. in range science from Texas A&M in 1979. He chose to emphasize range nutrition and economics at the graduate level, and took additional courses in feedlot management after completing his degree requirements. Francisco split his internship between a purebred Charolais operation, a major feedlot in the Monterrey, Mexico, area and a commercial cattle ranch. He now has a consulting business in Monterrey where he works primarily with livestock producers on pasture supplement and feedlot programs. Francisco uses computer record keeping systems for his clients, and works with least-cost rations and projected vs. actual performance evaluations. He also provides services in feedlot design.



Francisco Elizondo (R) is pictured with one of his feedlot clients in Mexico. Francisco is a 1979 range M.Agr. graduate now operating a consulting firm in Monterrey, Mexico.

Prior to entering consulting as a primary business venture, Francisco taught in the Department of Agri-business at Monterrey Tech. He is also active in the management of a family-owned ranch near Monterrey. Francisco believes that his internship helped to broaden his understanding of a wide range of agricultural problems. As he puts it, "the split internship gave me an opportunity to experience and learn something about 3 phases of the livestock industry, and I'm using all of it in my business. I believe the M.Agr. degree allowed me more opportunity to take courses in different areas of interest than would have been possible in a traditional degree."

Gerald Proctor's father was a ranch manager and Gerald grew up knowing that this was what he wanted to do. He completed an undergraduate degree in range science in 1979, and a M.Agr. in May 1981. Gerald arranged his professional internship with Granada Land and Cattle Company near Bryan, Texas. Granada is a large, diversified company using a service concept and a nucleus of expertise and tech-



Gerald Proctor (R), a M.Agr. graduate employed by Granada Land and Cattle Co. of Texas, is shown with Ken Freeman while Ken was on his internship at Granada.

nology. It specializes in livestock production ranging from embryo transfer to feedlot management. Intensive pasture programs in the central Texas area carry thousands of cattle annually, making Granada a unique opportunity for students to become involved in large volume cattle management.

Gerald was employed by Granada following completion of his M.Agr. degree, and is now manager of the 3,900 acre Cedar Creek Ranch near Wheelock, Texas. He makes the following point about his internship and employment with the same company. "It is nice when you can go right to work for the same outfit after graduation, but that should not be the idea of an internship program. The internship is a means to gain experience and learn more about both fundamentals and new techniques being used in the business. It should help prepare the students for an *area* of employment for which he is better qualified."

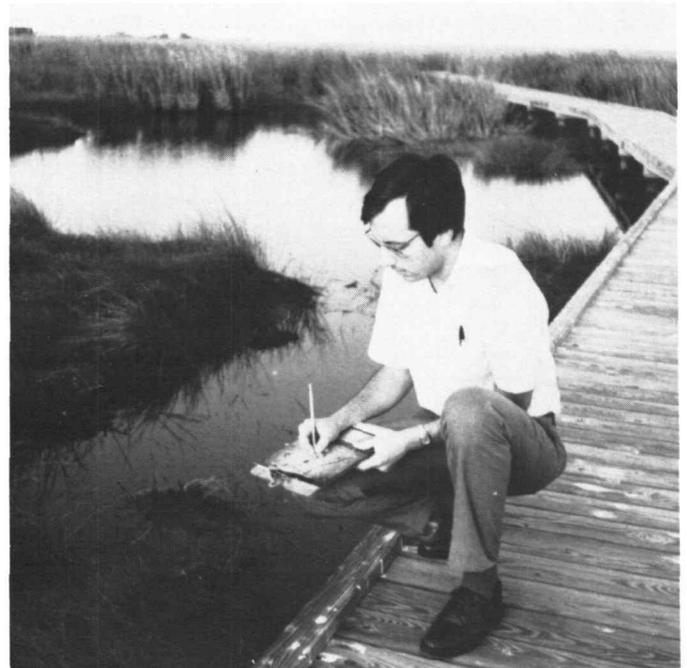
Master of agriculture graduates such as Tim, Alan, Francisco, and Gerald, who are now working in the field, are providing valuable insights as to how the program can be better designed. These evaluations are given attention by the department. For example, all of these ex-interns felt that they would have benefited by additional course work in business and "people" management. Gerald Proctor also suggested that more emphasis be put on employer "debriefing" to point out areas that need attention in development of the academic programs on campus. "Early identification of the internship provides a chance for the employer to have input into course selection," said Proctor.

Ken Freeman began a M.Agr. degree at Texas A&M in September of 1980 after receiving an animal science undergraduate degree at Tarleton State University. Like Gerald Proctor, Ken had a lot of "hands-on" ranch experience in his background, but still found the internship an essential element of his professional development. Ken also did his internship at Granada and was under the supervision of several property managers during his program. As Ken states: "I worked with some ranch managers who really helped me. They do things differently here (Granada) than back on the home place, so the internship is important even if you have ranch background. I was given a lot of record keeping responsibilities and learned new techniques. I built a professional attitude and outlook during my internship, and I think this is an important part of a graduate program." Ken is now managing a ranch near Hope, Arkansas.

M.Agr. graduates are not limited to the ranch management emphasis in degree programs. Barbara Stockard, a May 1980 M.Agr. graduate, planned her degree toward a career in environmental management. Her internship was with a Dallas-based environmental consulting firm that worked with impact assessments for lignite-fired power plants. Barbara's work experience included responsibility for portions of environmental assessments involving soils and vegetation. She located the internship early in her program and received valuable advice on course work recommendations from company personnel.

After working briefly with air quality permitting at another consulting firm, Barbara joined the Environmental Protection Agency as an environmental scientist in air and waste management. Barbara believes her internship was the key to "a good start in the environmental field" and that "the Master's degree is important." She says "the M.Agr. degree gave me a wide background and allowed a more open aspect in employment potential. I believe it was helpful to be able to

face a wider range of problems. The internship was particularly good to attune me to the *unexpected* things that do happen and for which experience is often the only solution. It helped my confidence." Like other students, Barbara looks back to areas where more study would have helped, such as computers and technical writing, but feels that the M.Agr. degree was a good approach to her career.



Gerald Rapp, a 1982 range M.Agr. graduate, surveys vegetation in Sea Rim State Park, Texas. Gerald used the M.Agr. degree to broaden his natural resources management capabilities as a city planner.

A unique use of a M.Agr. degree involved a student with a B.S. in sociology and a master's degree in urban planning. Gerald Rapp had been employed since 1974 by the City of Port Arthur, Texas, as assistant director of planning before he entered a M.Agr. program in the Department of Range Science in 1981. He recognized needs in city planning related to natural resources management. Rapp chose the M.Agr. degree in natural resource development after careful review of options because of the flexibility it offered to tailor a degree program to meet his specific objectives. Gerald felt that a knowledge of natural resource management was necessary for him to communicate effectively with consultants engaged by the city to do resource related studies, such as vegetation analyses.

Gerald's degree program included range courses as well as several in water, soils and other areas. According to Gerald, "range gave me the entrée to ecosystem management I needed. Before, I was mostly managing by crisis in dealing with natural resources. I can now be more planning oriented. I can conceptualize biological responses that will occur over time such as the use of low inputs to cause desired changes through secondary succession. This is planning, and it is a much more productive role for me professionally. I am also much better qualified to attend symposia and other meetings dealing with natural resource management and to interpret effectively information pertaining to our needs."

Gerald's experience in his profession was adequate to

allow waiving of the internship requirement in his degree program, only the second time this has been done in the Department of Range Science. He submitted a paper, however, dealing with the solution of a natural resource management problem in the Sabine Pass area wetlands that pertained to his work with the City of Port Arthur. Gerald believes he actually did an "internship in reverse." He used papers prepared in his graduate studies to help solve real problems he was dealing with on his job.

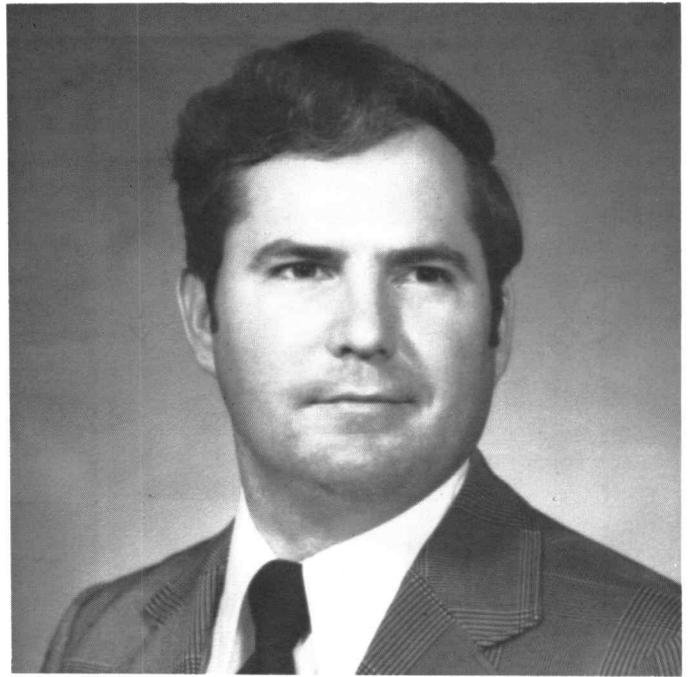


Jan Read, a 1982 range M.Agr. graduate, did her internship in Burley, Idaho, with the Bureau of Land Management. Jan is shown working in the USDA-ARS lab where she earned funds to support her on campus.

Jan Read, an August 1982 M.Agr. graduate, did her internship with the Bureau of Land Management at Burley, Idaho. Jan thinks that the internship helped her define her career interests more completely. "I was sure I wanted to be in some area of range management, and I wanted to have contact with producers. I felt that I would like to be involved in the actual application of management principles. The internship with BLM provided an excellent opportunity to do this type of work. I have a much better feeling now about my ability to apply range management practices whether with an agency or on a private ranch."

Jan's undergraduate degree was in animal science, and she decided on a master's program in range to give her a better balance "between the animals and the resource." Her internship came before she had finished her course work for the degree, which Jan considers an advantage. She says, "I was able to use my work experience to expose areas where I needed courses, and my advisory committee agreed with several changes in my program." Jan was recently employed by a ranch in southeast Texas.

The M.Agr. degree in range science also suited the interests of Bob Trott; in fact, he completed two M.Agr. programs at Texas A&M. After an undergraduate B.B.A. in finance in 1968, Bob served 5 years as an Air Force pilot. He returned to Texas A&M in 1973 and worked simultaneously on degrees in agricultural economics and range science. His internship programs included 3 months with a bank in Bryan, Texas, followed by 9 months on the O'Connor Brothers Ranch near Refugio. Bob graduated in 1977 and was employed by Victo-



Bob Trott used M.Agr. degrees in both range science and agricultural economics to enter a career in ag-finance. Bob is currently vice president for commercial loans at Victoria Bank and Trust in Victoria, Texas.

ria Bank and Trust. He is currently vice president for commercial loans and deals primarily with production agricultural loans, about 40% of which are on ranch properties.

Bob had the following comments about his internship program: "It's a chance to get your hands dirty—that is, to see the application of theory in the "real" world. I gained perspective and a better appreciation from the internships of what it takes to be successful in a professional career."

The M.Agr. degree helped Larry Miles to enter an extension service career. After receiving a B.S. degree in range science in 1978, Larry decided to look seriously at extension work. He built his degree program to fit this objective after consultations with extension and agricultural education staff members on the Texas A&M campus. He was able to enter the Extension Service as a County Extension Agent prior to graduation, and use the first 6 months of his employment as the internship period. Larry completed the M.Agr. degree in December 1980. He said, "I found I had a solid foundation in areas other than range although both of my degrees are in range. My undergraduate degree included a lot of hours in animal science and agricultural economics, which I use consistently in my work. I used the M.Agr. degree to further develop these and other areas, and to get the education courses I needed for extension work. I have found that my undergraduate range degree gave me a broad base upon which to build at the master's level."

Current students in the program include those with career interests in federal agencies, ranch management, and rangeland rehabilitation. These students arrange their own internships and usually provide their own financial support while on campus. Students who are on their internships receive wages and benefits that are negotiated with employers on an individual basis. Employers consider that the interns are contributing to their operations, and the interns must consider that the employer is contributing to their educational

opportunity. Scott Hennigar, who will begin his internship on a ranch in south Texas in May 1983, may have summed up the attitude many students have about the M.Agr. degree: "I think of my internship as an opportunity to work with a professional who has been successful for years doing what I want to do. If you want a management career, I don't know a better way to go about it."

Everyone involved with the Department of Range Science M.Agr. program agrees that a key element of its success is the willingness of cooperating employers to participate in

the development of students through internship opportunities. The result is mutually beneficial to the students, to the internship employer, and to the industry or profession that the student joins. Our students have been fortunate to locate productive internships which fulfill the field training and experience requirements associated with the degree. We thank those in the range-livestock and related industries who are making the program a success. It would not work without their participation.

Rancher Fences Creek to Slow Erosion

Brad Anseth

Joe Jepson, a young Townsend rancher in southwest Montana, has fenced both sides of a creek that winds through his property. This is part of a long range plan to improve the soil and water resources on his 480-acre ranch that he bought 3 years ago.

Originally he planned to fence only along one side of the creek, mainly to get better livestock distribution on his irrigated pasture. But in 1981 the creek went wild and caused him to think about more fencing.

The 1981 Memorial Day storm accelerated the erosion and slumping along Deep Creek, the creek running through his ranch. The high waters almost destroyed his irrigation pump site. This caused him to want to do whatever it took to keep the creek in its banks. The fence seemed a good idea. He thinks this will encourage the brush to spread out and send down more roots to stabilize the banks. Just keeping the cattle off the saturated banks should eliminate some sloughing.

The creek is the prime livestock water source for to pastures. Jepson is fencing a 30-foot corridor across the creek for livestock water and to serve as a moving lane. He plans to grade and riprap this section.

Jepson's concern for reducing erosion on the creek is part of a larger plan he has for the ranch. He thinks the entire ranch needs attention.

He has signed a Great Plains contract with the U.S. Soil Conservation Service for fencing as well as other soil and water conservation work. Under the contract he will receive technical help and cost-share funds. In the end he will have three dryland and two irrigated pastures instead of just one large pasture as it was.

The fences will help Joe toward his goal of getting situated to run 100-200 head of yearlings. As a part of that goal, he has also seeded 100 acres of dryland grainland to alfalfa and pubescent wheatgrass, rested his rangeland for 2 years, and plans to develop a well to bring stockwater to 3 of the 5 fields.

Once the improvements are in place, Jepson plans to develop and use a grazing system on the ranch. He knows it will take time to improve the soil and water resources, but he has already seen the improvement and plans to continue his work.



Deep Creek, north of Townsend, has a history of erosion. Jepson fenced along the creek's corridor to keep his cattle out and allow the brush and grass to spread. The vegetation will help stop the stream from cutting and eroding the banks.



Joe Jepson (left) fenced both sides of Deep Creek in an effort to allow the vegetation to grow and stabilize the eroding stream banks. Jepson and Mike Crowell (SCS) stand in the fenced stream corridor.

The author is with the Soil Conservation Service, Bozeman, Mont.

Editor's Note: This article is an example showing that small ranchers too, are interested in soil conservation and range management.