

Pasture and Livestock Management Workshop for Novices: A New Curriculum for a New Clientele

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ABSTRACT

Since 1994, urban-absentee landowners have dominated rural landownership in Texas. This landownership change has created potential environmental problems associated with natural resource management. Few of the new landowners have any formal training in the basics of the soil–plant–animal interface. The solution may be to develop a vehicle that provides the new class of landowners with basic information regarding natural resource management. Faculty members from the Texas A&M University (TAMU) Agricultural Research and Extension Center–Overton (representing both Texas Cooperative Extension and the Texas Agricultural Experiment Station and having department affiliations with Soil and Crop Sciences, Animal Science, and Agricultural Economics) developed the Pasture and Livestock Management Workshop for Novices. The main goals in developing the program were to: (i) provide basic information regarding management of soil–plant–animal resources; and (ii) introduce the workshop participants to the educational resources available to them through the land-grant university system. To determine effectiveness of the program, pretests and posttests were administered to the workshop participants. To date, pretest scores have averaged 63.8 (D average), whereas posttest scores have averaged 80.3 (B average). Exit surveys were also conducted to determine the attitude of the workshop participants regarding the overall quality of their experience. The popularity of the workshop is such that, since the inception of the first workshop (2001), subsequent workshops have been booked nearly 1 year in advance. Given the combination of learning environment, mix of classroom and field laboratory exercises, and nonthreatening scientific presentations, we have little doubt that the Pasture and Livestock Management Workshop will continue to be a popular program with urban-absentee landowners.

LANDOWNERSHIP PATTERNS in Texas are changing, and this new owner/manager change is accompanied by a general lack of knowledge about soil–plant–animal economic management systems. Where much of the rural property was once owned and passed from generation to generation by rural farmers and ranchers, urban-absentee landowners are purchasing more land with each passing year. According to one source, farmers and ranchers dominated rural landownership until about 1994 (Wilkins et al., 2000). Since that time, consumers interested primarily in recreational purposes have

begun to dominate ownership of the rural landscape. Gilliland and Mays (2003) noted that recreational demand continues to drive rural real estate markets and that the demand for rural land was increasing even in more remote areas. In fact, Texas Parks and Wildlife (TPWD, 2002) recently noted the growing problem of Texas rural land fragmentation into smaller tracts, often with new urban-based owners who lacked a background in wildlife or land management. The TPWD also indicated that for more than a century, rural Texas landownership had been primarily farm and ranch families who lived on the land. They also reported that in recent decades, the countryside had undergone severe fragmentation into smaller tracts owned increasingly by urban-absentee owners seeking a recreational or retirement site. In 2000, the USDA Natural Resource Inventory published a report indicating Texas led the nation in the loss of undeveloped land from 1992 to 1997 (USDA, 2000).

There are several reasons for this change. Many children who were raised on farms or ranches moved to cities to find employment after completion of high school or college. Additionally, financial constraints and estate taxes have forced the liquidation of many farms and ranches. Finally, as elderly rural landowners retire, they are selling property to city dwellers to augment their retirement incomes. Urban people, whether they be “blue collar” workers, doctors, attorneys, other high-income professionals, or simply retirees, are seeking escape, if only for the weekend, from the hustle and bustle of the city and are purchasing land at unprecedented levels. Often, these new landowners have little regard for the price or production potential of their new investment. Also found in this new group of landowners are those who were absentee landowners returning to their property after retirement. These absentee landowners also need basic knowledge of land and natural resource management.

This landownership change has created some potential environmental problems associated with natural resource management. Few, if any, of the new landowners have any formal training in the basics of the soil–plant–animal interface. Therefore, they are likely to use improper natural resource management strategies based on faulty knowledge or poor advice from well meaning neighbors or popular press articles. Lack of knowledge regarding management of natural resources can also quickly translate into a poor economic situation. If the weekend property consumes too much of their disposable income, landowners can become discouraged with the venture and the property will eventually be sold.

One possible solution is to provide this new class of landowners with appropriate, basic information regarding resource management. Fortunately, the urban dweller is accustomed to taking advice and even paying for advice from attorneys, accountants, and other professionals. The new urban landowner generally does not have erroneous preconceived ideas regarding natural resource management. Therefore, the

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urban landowner is often more open to natural resource management education than some of our more traditional landowners. An effective vehicle with the proper format, however, was needed to entice their involvement and provide for the proper education of this growing class of natural resource stewards. While there have been other “grazing schools” in existence for quite some time (Gerrish et al., 1994; Sandage et al., 1996; Lacefield, 1999) previous programs contained information that was not easily adopted and implemented by first-time ranchers.

Urban-absentee landowners needed to be linked with subject matter experts regarding the soil–plant–animal interface in a relaxed setting that allows for imparting the requisite information while providing the opportunity for question-and-answer sessions. Most faculty members of land-grant university agriculture programs can provide the required expertise. One such program has been developed by a multidisciplinary, multiagency team at the Texas A&M University Agricultural Research and Extension Center at Overton (TAMU Center–Overton). The main goals in developing the program were to (i) provide basic information regarding management of soil–plant–animal resources, and thus provide guidelines for sound economic decision making; and (ii) introduce the workshop participants to the educational resources available to them through the land-grant university system.

MATERIALS AND METHODS

Faculty members from the TAMU Center–Overton representing both Texas Cooperative Extension and the Texas Agricultural Experiment Station as well as departments of soil and crop sciences, animal science, and agricultural economics developed the Pasture and Livestock Management Workshop for Novices. The program is a fee-based, intensive 3-day event that targets novice or inexperienced ranchers who are interested in the proper management of their soil, plant, and animal resources. The registration fee has been \$250 and enrollment has been limited to 40 individuals each session to facilitate open discussion and interaction between participants and faculty members. Initially, the workshop was advertised through various news media outlets such as newspapers and magazines. Since the inception of the workshop, follow-up stories appearing in magazines and state-wide agriculture journals have stimulated weekly inquiries regarding registration for the subsequent workshops to the extent that we have more interest than capacity (Redmon, 2003). The workshop advertises for novice ranchers, that is, those with little or no knowledge regarding management of soil, plant, and animal resources, and thus far, novice ranchers have been the type of individuals who have enrolled in the workshop. Workshop attendees travel to the TAMU Center–Overton and spend 3 days learning basic fundamentals of pasture and livestock management and economic implications. The Overton Center is somewhat unique among Texas A&M University facilities and this seems to contribute greatly to the overall success of the program. Distinctive features of the Overton Center include the following:

- Resident faculty expertise in all requisite areas, including soils, forages, animal sciences, and agricultural economics.

- The TAMU center’s East Texas location is in near proximity to Houston and the Dallas/Fort Worth metroplexes where many of the urban-absentee landowners reside.
- Pastures and grazing systems research that are targeted at stocking rates, strategies of use, and adapted beef cattle genetics.
- Small plot research that includes various warm-season and cool-season forage species.
- Livestock handling facilities.
- Faculty and on-site administrative cohesiveness and teamwork that results in a true “team approach” to conducting the workshop.
- Equipment and land area availability to demonstrate planting, herbicide application, calibration, and other management activities.

The workshop covers a variety of topics related to the soil–plant–animal interface. The agenda for the workshop is shown in Table 1.

In keeping with the intent of the workshop, subject matter is presented in an introductory manner. Fundamentals of the soil–plant–animal interaction are stressed, but more complex information has been presented based on the questions of the participants. During the frequent discussion sessions, questions are posed by workshop participants that lead into mini-discussions of more advanced topics; thus enabling the participants to (i) more fully understand the complexity of resource management, and (ii) learn the appropriate questions to ask. In addition to classroom lectures, workshop attendees spend approximately 50% of the time in field laboratory exercises. These exercises are primarily demonstrations and are not designed to provide actual hands-on activities due to time constraints. Field laboratory exercises include the following:

- Viewing and discussing differences in various adapted warm-season perennial forage grass species and varieties
- Viewing and discussing differences in cool-season forage legume species and varieties
- Viewing and discussing differences in small grain and annual ryegrass varieties
- Examining forage establishment equipment
- Demonstrating both boom and boomless sprayer calibration techniques
- Learning about body condition scoring of cattle
- Demonstrating calf vaccination, castration, dehorning, and implanting techniques
- Working livestock with trained dogs
- Obtaining appropriate soil samples
- Learning to inoculate legume seed
- Learning pasture appraisal and grazing management tips
- Other items such as electric fencing, corrals, and livestock handling and movement

Workshop days begin early and last late into the evening. A notebook containing numerous research-based fact sheets regarding all aspects of the soil–plant–animal interface is provided to each participant. All noon and evening meals (e.g., barbeque or ribeye steaks) are provided, as are appropriate break refreshments. In addition, participants receive a shirt and cap with a unique embroidered workshop logo. Adequate time is allowed during the day and especially each evening during and after the meal for question-and-answer sessions

Table 1. The agenda for the workshop for Days 1, 2, and 3.

Day 1	Activity	Day 2	Activity	Day 3	Activity
8:00–8:45 a.m.	Registration	8:15 a.m.	Nutrient requirement for grazing animals	8:30 a.m.	Marketing opportunities for livestock
8:45 a.m.	Welcome	8:45 a.m.	Pastures and grazing systems: What to look for	9:00 a.m.	Animal supplementation
8:50 a.m.	Overview of workshop	9:30 a.m.	Stocking rate: A critical factor in livestock management	9:45 a.m.	Break for coffee/snacks
9:00 a.m.	Planning for profit and alternative enterprises	10:00 a.m.	Ranch record keeping and performance analysis	10:15 a.m.	Hay/silage and forage testing
9:30 a.m.	Soils, soil fertility, and plant nutrition	10:45 a.m.	Break for coffee/soft drinks/snacks	11:00 a.m.	Panel discussion with participants/ Program evaluation/Post-test
10:45 a.m.	Break for coffee/soft drinks/snacks	11:15 a.m.	Animal selection and management for forage-based production systems	12:00 noon	Adjourn
11:00 a.m.	Plant growth and development	12:00 noon	Lunch		
11:45 a.m.	Lunch	12:45 p.m.	Travel to field for demonstrations		
12:30 p.m.	Plant species for east Texas	1:00 p.m.	Soil sampling demonstration		
1:00 p.m.	Legumes: What, how, and why	1:30 p.m.	Forage legumes seed inoculation		
1:45 p.m.	Forage systems	2:00 p.m.	Pasture appraisals and grazing management tips		
2:30 p.m.	Break for soft drinks/snacks and travel to forage plots	3:00 p.m.	Break for soft drinks/snacks		
3:00 p.m.	Annual ryegrass/small grains, forage legumes, bermudagrass	3:15 p.m.	Return to Center for continued demonstrations		
4:45 p.m.	Travel to animal handling demonstration area	3:30 p.m.	Pasture establishment and planting equipment		
5:00 p.m.	Livestock working with dogs	4:15 p.m.	Sprayer calibration		
5:30 p.m.	Body condition scores for cattle	4:45 p.m.	Weed management in pastures		
5:50 p.m.	Animal handling (implants, castration, ear tagging, etc.)	6:30 p.m.	Ribeye steak supper and discussion at TAMU–Overton Center		
7:15 p.m.	Bar-B-Q supper and discussion at TAMU–Overton Center	7:30 p.m.	Adjourn		

that have been encouraged by a facilitator among the workshop participants and subject matter experts.

RESULTS

Thus far, workshop participants have been represented about equally by men and women. To determine effectiveness of the program, pretests and posttests that evaluate the attendees' knowledge about various soil, plant, and livestock topics were administered to the workshop participants. To date, pretest scores have averaged 63.8 (D average) whereas posttest scores have averaged 80.3 (B average), or an improvement of two letter grades. Exit surveys are also conducted to obtain feedback from workshop participants regarding the overall quality of their experience. Comments have been the most complimentary of any program in which the authors have been involved. Some comments received have been as follows:

This was a great course that mixes the knowledge of the presenters with the field trips!

All portions of this program were more than satisfactory!

The strength of the program lies in the voluminous amount of knowledge that was imparted by the instructors with textbook as well as field expertise.

All of the instructors were GREAT and able to answer all questions and were very patient.

I know that the instructors really wanted to help us and did!

Excellent size workshop for learning.

Excellent program overall! I'm glad I took the time...

The popularity of the workshop is such that subsequent workshops have been filled nearly 1 year in advance since the inception of the first workshop in 2001. The workshop has had three successful years and has since generated much interest

among extension specialists, other state and federal agencies, and nongovernment organizations across the southern USA (Redmon, 2003).

SUMMARY

One of the often mentioned, but surprising, comments made by participants at the beginning of each workshop has related to their lack of knowledge of the land-grant university system and their access to the vast store of knowledge and expertise available to them through the land-grant university. With so little emphasis on agriculture today, many, if not most, urban residents have little knowledge of the land-grant university and what the system entails. This one piece of knowledge alone has been of tremendous value to workshop participants.

Regarding future workshop events, several new program aspects have been considered, one of which has been to develop a quarterly newsletter for all workshop alumni. Outside reviewers have suggested that more than one workshop per year be offered and that the program should be taken "on the road" to various parts of the state. At this time, an additional annual workshop has been scheduled, and we offered a 2-day event this past fall for workshop "alumni." This 2-day event was an Advanced Topics Information Exchange and focused on marketing strategies for calves produced by the various operations with additional topics on establishing and managing winter pastures. In addition, this 2-day event also provided previous workshop attendees an opportunity to share success stories or inquire about management strategy successes and failures. Regarding taking the program to other parts of the state, we presently feel that because of our unique blend of faculty expertise, location facilities, and proximity to the large metropolitan areas, replicating the workshop at other Texas A&M University facilities or other locations would be difficult at this time.

With the ongoing demand for information regarding natural resource management, there is little doubt the Pasture and Livestock Management Workshop will continue to be a popular program with not only urban-absentee landowners, but also for those attendees who advance to the next level of management via the Advanced Topics Information Exchange.

With development of a follow-up survey instrument, we plan to track workshop alumni and determine, among other items, (i) if they have indeed initiated contact with their local county extension educator, and (ii) what topics would they most like to cover if they should return for the 2-day Advanced Topics Information Exchange.

We have learned much about the event since its inception. Pasture and Livestock Management Workshop faculty meet immediately after each workshop to discuss participant exit survey comments and our own observations regarding how the workshop can be improved. With each workshop, we discover new topics that should be incorporated into the agenda and we have learned how to make existing presentations more "user friendly." Based on the first two events, we added an additional one-half day to the third workshop to better cover existing topics and provided additional time for new topics that have been deemed important enough to be added to the agenda. While we think the program in its present form provides a rewarding experience for the workshop participants, we learn from each experience how to improve the format and content of the workshop. We feel that each workshop has im-

proved over the preceding one, and we continually strive to enhance the program.

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