

## Land Stewardship for the 21<sup>st</sup> Century: pasture and livestock management workshop for novices

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**Introduction** Land ownership patterns in Texas and the southern USA are changing. Since 1994 (Wilkins *et al.*, 2000) consumers interested primarily in recreational purposes have become the predominant owners of rural land. This land ownership change has created potential land stewardship problems associated with natural resource management. Few, if any, new landowners have any training related to the soil-plant-animal interface. New land owners need linkage with subject matter experts from land grant universities in a relaxed instructional setting while providing the opportunity for question and answer sessions. Thus, a programme was developed by a multi-disciplinary, multi-agency team at the Texas A&M University (TAMU) Agricultural Research & Extension Centre at Overton targeting novice landowners. The main goals in developing the programme were to a) provide basic information regarding management of soil-plant-animal resources that leads to sound, economic decisions and good land stewardship; and b) introduce the programme participants to the educational resources available to them through the land grant university system.

**Materials and methods** Faculty at TAMU-Overton, representing Texas Cooperative Extension and the Texas Agricultural Experiment Station as well as TAMU Departments of Soil and Crop Sciences, Animal Science, and Agricultural Economics developed the Pasture & Livestock Management Workshop for Novices. The programme is a fee-based, intensive 3-day event that targets novice or inexperienced landowners. Topics covered include:

- Soil resources and soil fertility
- Plant growth and development
- Adapted forage species
- Weed management
- Using forage legumes in the pasture system
- Developing forage systems
- Stocking rate & grazing systems
- Nutrient requirements of livestock
- Animal selection and management
- Record keeping

Frequent discussion sessions enable participants to begin to more fully understand the complexity of resource management. In addition to classroom lectures, Workshop attendees also spend approximately 50% of their Workshop experience in field laboratory exercises related to management practices. To determine programme effectiveness, pre-tests and post-tests, which evaluate attendees' knowledge about various soil, plant, and livestock topics, are administered to Workshop participants. Exit surveys are also conducted to obtain feedback from Workshop participants regarding the overall quality of their experience.

**Results** The Workshop has been a success due to the unique collaborative work between faculty from agencies and departments at TAMU-Overton. Results of the Workshop include:

- Participants were introduced to the soil-plant-animal interface.
- Effects on soil and water conservation and improved air and water quality associated with appropriate stocking rates was highlighted.
- Fertiliser application based on soil test to reduce negative effects on the environment while improving forage production.
- Introduction to IPM strategies for managing weeds rather than the traditional "mow" or "spray" only approach.
- Participants were made aware of the need for quality animal health care.
- Equipment for planting, fertilizing, herbicide application, etc., was demonstrated.
- Alternative production systems compared to livestock production were illustrated. To date, pre-test scores versus post-test scores indicate a significant improvement in knowledge of the Workshop participants during the short 3-day event.

**Conclusions** The Workshops have improved significantly the participants' abilities to be good land stewards, while increasing the profit potential of their production systems. Workshop participants also were introduced to the functions of the land grant university system.

### Reference

Wilkins N., R.D. Brown, R.J. Conner, J. Engle, C. Gilliland, A. Hays, R. Douglas Slack & D.W. Steinbach (2000). Fragmented Lands: Changing Land Ownership in Texas. MKT-3443.