

**TRAINING, NETWORKING, AND DEMONSTRATING WHOLE FARM FORAGE
GRAZING SYSTEMS****SECTION I****General Information**

ATTACHED

SECTION II**1. Overview/Summary**

An effort to develop one curriculum on management intensive grazing across state lines and institutional barriers was the main thrust of our joint project. Significantly more time than originally planned had to be used for us to have a successful product. To train people of different affiliations in a common approach on sustainable management intensive grazing systems was the second outcome of the project. Demonstrations of specific practices were developed to investigate and show how to overcome barriers commonly found in getting people to adopt management intensive grazing systems. Those who attended these sessions have in turn carried this information to over 3,457 farmers and landowners through workshops, seminars, tours, newsletters and one on one technical advice.

2. Objectives / Specific Results

1. Objective: To train extension, conservation partnership and related agribusiness personnel in regional workshops to transfer information about economically sound and environmentally sensitive integrated grazing systems.

A total of 4 training sessions were completed by one planning team for the "REGIONALLY BASED PROFESSIONAL DEVELOPMENT PROGRAM FOR GRAZING SYSTEMS MANAGEMENT" project submitted by The Pennsylvania State University. A joint team from both grants developed the training program and taught the curriculum. Details of that activity were provided in the report submitted by the Pennsylvania State University. Members of this team spent more hours than originally planned integrating and developing this information. This task is something that had never been attempted before in the Mid-Atlantic and proved to be possible, but required far more time and integration of more topics and people than we originally intended.

A total of four two-part sessions (eight two-day workshops) were conducted in the fall of 97 and the spring of 98. A team of individuals from the Pennsylvania State University, the USDA, Natural Resources Conservation Service, and the University of Maryland conducted these sessions. A total of 28 individuals from NRCS, Conservation Districts, and Extension Service in Maryland and Delaware attended these sessions in addition to individuals from New Jersey, West Virginia, and Pennsylvania. The Maryland team was an integral part of all parts of this process. See the report submitted by the Pennsylvania State University for greater details on this objective.

2 Objective: Use 12 actual farms as demonstrations to serve as training tools, research sites, and educational training centers. Demonstrate to 450 farmers, operations using management intensive grazing systems

A demonstration review team was developed; made of representatives from the Maryland Extension Service, the USDA Natural Resources Conservation Service, and Conservation District personnel. Project Proposals were requested from Conservation Districts and Extension Offices who were interested

in promoting more sustainable grazing practices in their counties. A total of twenty-four applications were received of which 10 were approved. Two were cancelled after six months and two additional projects were added. Due to failure of the landowner to complete the planned project, one project was not completed.

The team ranked applications based on the following criteria:

1. Projects demonstrating practices not currently cost-shared under federal or state programs.
2. Projects which focused on the improvement of existing systems.
3. Projects demonstrating innovative technology or management practices.

3. Specific Project / Results

Giesbert - Loafing Lot Management System and Sediment Collection System

A complete system was designed to maintain a loafing lot area in grass using several grassed paddocks and a sacrifice area for wet weather conditions. A water collection system for runoff from the system was developed including a stormwater / sediment basin.

This project successfully demonstrated that for principally confinement operations there are ways to begin a transition to more environmentally healthy loafing areas and begin to see the benefits of grazing systems and improve water quality conditions without radically changing the dairy layout. This is the first step that traditional operations can take to move away from confinement operations and towards sustainable management intensive grazing systems. Many traditional operators refuse to consider grazing in part due to the rapid and complete changes required for an immediate switch over. Loafing lot management systems are an effective way to get farmers to see many of the benefits of grazing without them feeling they are risking it all on something they are not familiar with doing.

A group from the Environmental Protection Agency, Maryland Department of the Environment, and the Maryland Department of Natural Resources have toured the site to see what this system can do. Local conservation personnel have toured the site and are using it to show other landowners a beginning step towards management intensive grazing systems.

Richard Holloway – Recycled Concrete Flats for All Season Walkways Across Streams in Management Intensive Grazing Systems

Keeping start up costs as low as possible is critical to getting more management intensive grazing systems started. In the past expensive, concrete bridges have been suggested as reasonable alternatives for crossing streams. Low flow crossings made of recycled concrete slats offer a far cheaper alternative to bridges that cost over \$10,000.

The local district office, which sponsored this demonstration, has used this site on a Maryland Tributary Team Strategy Tour and during a Farm Visitation Day by the Farm Bureau. A total of approximately 120 people attended these tours. Local district personnel have shown 30 people this site and how it is an inexpensive way to solve a common environmental problem on grazing systems and can be an impediment to starting a grazing system.

An article on this system was featured in the district newsletter, which reaches 400 landowners.

J. Parker Smith – Warm Season Grass Planting

The Carroll County Extension Service provided leadership on a warm season grass planting on the property of J. Parker Smith. Due to two years of drought that allowed germination, but caused seedling death, this planting will need to be continued using other funding sources that were not available at the time of the original request. Although the failure of this planting is regrettable, it does provide a valuable lesson in the need to expect natural

disasters to complicate the evaluation of new agronomic practices, and not draw immediate conclusions from those events.

Diem Farm –Warm Season Grass Planting

The Diem Farm in Denton, Maryland is a 40 head beef herd in Denton, Maryland. Mr. Diem was interested in establishing a warm season grass pasture to overcome the decrease in production caused by the “summer slump” of cool season grasses. This problem limits season long grazing and causes more reliance on confinement feeding.

Mr. Diem planted four acres of Eastern Gamagrass and began utilizing the stand one year after it was established. Mr. Diem’s pasture was featured in an NRCS video titled “Eastern Gamagrass from the Past to the Future.”

Since the original planting, a second planting has been done and the landowner is very satisfied with the use of Eastern Gamagrass.

The local Conservation District has featured this project in its District Newsletter to over 2,000 landowners.

The University of Maryland Eastern Shore - Small Ruminant Management Intensive Grazing Project

A digital scale was purchased to help evaluate a small ruminant management intensive grazing system. Sheep and particularly goats are just beginning to be used on management intensive grazing systems in Maryland. The potential use of these animals in small farming operations is very large here due to the large urban ethnic market for meat and milk products in the Mid-Atlantic. Many farms could manage invasive weeds using goats and there by cutting pesticide use, reducing farm operating expenses, and producing a profitable product. A lot more work is yet to be done on this ongoing demonstration.

Carl Robinette – Steep Walkways for Management Intensive Grazing Systems

The Allegany Soil Conservation District selected a problem common to many steep areas. Erosion on stock trails can be so severe that landowners are reluctant to further subdivide paddocks if it requires that a new travel corridor be established. By using breakers and cut-off trenches on Carl Robinette’s 30 cow/calf beef operation, surface flows were diverted into heavily sodded pastures that could easily resist surface water flows from heavy down pours common in mountainous regions. Another benefit of this system is that the entire walkway is in grass and grazable as a paddock, except for small erosion resistant gravel pads at the end of the ditches across the walkway. Gravel or asphalt walkways are lost acres in a management intensive grazing system.

The District hosted a Conservation Tour that featured this site as one of its tour stops. Twelve people attended this tour.

Charlie Twigg Sling Pump

Along large rivers it is potentially environmentally damaging to allow cattle to drink water directly from the stream and is a safety issue for the livestock themselves. In many locations electricity is not near enough to be used and is expensive and risky to extend to the streambank. A sling pump could be used in that situation to get water from the stream. The sling pump uses the stream’s current to pump water through a hose to a tank away from the stream. The Potomac River is a location in Western Maryland where such a device should work. The property of Charlie Twigg was ideally suited for this demonstration. Due to record low flow conditions this project has had some difficulty in operating as planned, but still will be used either there or in similar situations in the Allegany Soil Conservation District.

Pleasant Valley Farms – All Weather Use Area

A major problem in most grazing systems is where do you place animals in wet weather that will cause minimal environmental damage and allow ready access to the grazing system once conditions improve. At Pleasant Valley Farms, an all weather area was created to allow season long use of the grazing system and a stable area for feeding and exercise of 75 beef cows when conditions warranted it to protect the grass pasture from wet weather damage.

The site was visited by the Montgomery Farmer's Club and Guests to see the system and discuss its uses. Approximately 20 additional individuals have been taken to the site to observe its usefulness.

Carol Jordan – All Weather Use Area and Management Intensive Grazing for Horses

Another area that causes major problems both for the environment and the agricultural community is the problems coming from grazing systems or the lack there of on horse pastures. In Montgomery County, Maryland alone there are over 14,000 horses. Grazing system for them have the same problems common to dairy operations and beef operations. Ms Jordan was willing to be a demonstration site to show that management intensive grazing can work for horse farms, and create a sustainable management system. She has hosted a county horse management seminar attended by 65 people to view her management intensive grazing system for horses.

3. Objective: Establish a farmer network in each of the five regions of Maryland and Delaware for mutual support on forage grazing system issues.

A regional newsletter entitled "Forage Bits" has been set up under the MD-DE Forage Council to serve as an outreach tool to help link with farmers on grazing and forage issues. Future expansion of this newsletter should help to begin the networking process.

4. Objective: Develop six regional economic/environmental case studies that are local enough to interest skeptics, but regional in applicability to other states. Prepare a publication to summarize this information targeted toward farmers stating the results of this study. Create an educational video to be used to convey this information.

Due to staffing limitations two case studies were developed in conjunction with the 4 training sessions we presented. The details of these cases studies can be found in the Economic / Environment ring binder of the educational materials. We were not able to develop an educational video as planned due to staff limitations and suitable subject matter.

5. Objective: Bring new and innovative ideas into the Mid-Atlantic Region on forage grazing issues and their impact on economic and environmental sustainability of farms and communities. Conduct several, (three), regional seminars and three regional farm field tours. Develop a "Thunderbook " for grazing systems that is a product of the seminars. We will publish this handbook for anyone who wants it.

Through our training program we held four regional training sessions that provided lots of interaction on sustainable grazing issues. From that interaction many innovative practices have begun in Maryland that were not there before the training sessions began. A series of four "Thunderbooks" was developed for participants at the training sessions. These ringbinders of technical information are also available for anyone who requests them from Larry Muller at the Pennsylvania State University.

4. Potential Contribution and Practical Applications of the Professional Development Program

B. Potential Benefits of Impacts

In addition we have seen a dramatic increase in interest by agricultural agencies in support of management intensive grazing. The Grazing Land Conservation Initiative has become a major method to develop sustainable grazing systems activity in the USDA, Natural Resources Conservation Service. Another Federal conservation program the Environmental Quality Incentives Program has become a very practical way to assist people interested in getting started in management intensive grazing. The Extension Service has also increased its educational activities on grazing.

- A. Trainee Adoption and Direct Impact/
- C. Feedback from Farmers and Others

Benefits of the Pennsylvania-Maryland Management Intensive Grazing Course to Maryland Producers and Producer Advisers

Numerous educational programs and training activities in Maryland benefited from the Management Intensive Grazing (MIG) Course jointly developed and presented by The Pennsylvania State University, the University of Maryland and Natural Resource Conservation Service (NRCS) personnel in both states. This course was partially supported by funding from the USDA Northeast SARE program. County, regional and district employees of Maryland Cooperative Extension, NRCS, local Soil Conservation Districts and the Maryland Department of Agriculture attended the training at both the Port Deposit, MD and Somerset, PA locations.

Following is a list of some of the educational programs and activities that have been conducted at the state, regional and county level utilizing information and materials presented at the 4-day course and comments about the benefits of the course to these programs and activities.

Washington County – Donald Schwartz

“The class made a very real impact on the ability of Maryland agents to more actively pursue grazing and grassland educational efforts. It also provided a detailed resource that I have used with pasture walks, other seminars and individual consultations.”

Activities conducted subsequent to the training include five pasture walks in 1998 with a total attendance of 160 people, three pasture walks in 1999 with a total attendance of 100 people, and a Grassland Seminar in 1999 with an attendance of 85 people from the tri-state Maryland, Pennsylvania and West Virginia area. One of the tour stops at the 1998 and 1999 Western Maryland Research and Education Center Field Day was at the site of a pasture project demonstrating management intensive grazing practices. About 300 people from the tri-state area participated in these tours.

In addition to the group activities, over 200 calls and consultations on grazing and grassland management have been handled over the past two years continuing a trend of increasing acres of pasture and grassland in the county and increasing levels of grazing management.

Frederick County – Stanley Fultz

“I have used the material in many pasture related programs, however the major uses have been during pasture walks and the pasture management series of meetings conducted in 1998.”

Two pasture walks were held in 1998 with a total audience of 84 and five in 1999 with a total audience of 130 people. A 5-night Management Intensive Grazing Workshop was held in 1998 with 18 producers participating. A workshop notebook was assembled from materials adapted from the PA-MD Management Intensive Grazing Short Course.

Carroll County – Mike Bell

The Carroll County Office of Maryland Cooperative Extension and Carroll Community College Advanced Technology Center for Agriculture and Business Development provided coordination for a 4-night series of meetings entitled “Basic Pasture Management: A Practical Guide to Productive Pastures” (copy of announcement brochure attached). The meetings were held simultaneously at four locations through use of the Maryland Interactive Distance Learning Network (video conferencing system). Much of the information presented by the speakers and contained in the notebook that participants received (copy of cover attached) came from the four notebooks of information participants received at the PA-MD Management Intensive Grazing Course. Total attendance for the four locations was 55. Mike said, “I used various materials from the four grazing notebooks for my talks and as reference materials for our notebook. The four notebooks are excellent and make very good references.”

Fourteen people attended a pasture walk in Carroll County in 1998. Some of the information from the PA-MD training was used as handout materials.

Baltimore County - David Martin

Ten people attended a pasture walk in 1998 on a farm that received one of demonstration project awards from this grant. The demonstration was a seeding of eastern gamagrass. Information from the notebooks was duplicated numerous times in response to requests for information.

Harford County - Robert Halman

Two programs were conducted using materials from the PA-MD training. One was a 2-day Pleasure Horse Seminar on basic pasture and horse management. The second was a 3-day Small Farm Management workshop. Copies of the announcement brochures for these two programs are attached. “I used a lot of the materials and lecture information from the MIG course in these two programs.” Fifteen people attended the horse seminar and 10 the small farm workshop.

Southern Maryland Region - Anne-Meredith Webster and Janine Baratta

A 5-week series of evening Management Intensive Grazing training meetings were held in January-February 1998 at each of two locations in southern Maryland, one in Prince George’s County and the other in St. Mary’s County. The four notebooks from the PA-MD training were condensed into one. Twenty-five horse, beef, goat and llama producers attended each location. In October 1998, a follow-up activity for those who participated in the training was a bus tour to Frederick County, Maryland, to view management intensive grazing practices on farms. About 40 people participated in the tour.

Cecil County - David Wilson

A one day "Pasture Management for Part-Time Farmers" program was offered in March 1998 with 19 people from Maryland and Delaware attending. A reference notebook was assembled with much of the material being duplicated from the PA-MD MIG Course notebooks. The notebook has also been provided to several other producers who did not attend the program. We will very likely offer the program again in the spring of 2000.

Summary

These programs and activities directly benefited from the educational training and materials that participants in the 4-day PA-MD Management Intensive Grazing Course received. There were other less obvious benefits. Some of the participants have changed employment and other states are benefiting from the course information and materials. Other meetings than the ones listed above have been held. These meetings have been less intensive and fewer handout materials distributed but the meetings still benefited from the course through the training that the presenters received.

And finally, the benefits of interstate and interagency collaboration should not be overlooked. This was by far the most intense training effort with which I have ever been involved. The combining of expertise and resources across states, agencies and disciplines was a tremendous benefit even to those of us involved in developing and teaching the course. I think we all learned from the interaction with our co-workers in other disciplines. The integration of our various disciplines and areas of expertise into a holistic farm management system was a challenge, but it was well worth all of the efforts.

5. Future Recommendations & Areas Needing Additional Professional Development Efforts

Additional in field application on planning management intensive grazing systems in a training environment would be useful. It is likely that a program of this nature will be done in the near future.

Agriculture in the Mid-Atlantic is at a turning point. Economic and environmental issues have joined forces driving farms to change or get out. As an example, nutrient management issues are but one area that by law where change will have to occur. Management intensive grazing systems offer a way to change in both areas and maintain land in a sustainable agricultural use. It is critical that an aggressive program of information exchange be maintained during this time of rapid change and uncertainty in agriculture. Professionals in agriculture need to be able to move beyond traditional approaches and recognize how sustainable approaches are viable options both economically and environmentally. Analysis and promotion of successful operations is a major key to fostering that change.

6. Publicity for the Activities and Programs

The training sessions for the project were advertised throughout the Mid-Atlantic to the professional Ag community. We had attendees from Maryland, Pennsylvania, West Virginia, Delaware, and New Jersey.

Workshops and tours were advertised and promoted at the local level.

See enclosed documents.