

## 2004 Annual Report for WERA 1002

### Synopsis of the minutes of the 2005 meeting, Salt Lake City, Utah, January 7<sup>th</sup> 2005

The meeting was called to order at 8:30 by Chair Paul Nyren.

Jennifer pointed out that there was a charge for the meeting room and collected \$15.00 from each participant to cover the room charge.

Paul added a presentation on Process Based Ecosystem management to the agenda.

Chad distributed the minutes from the 2004 meeting, they were approved as distributed.

Mark Brunson gave a presentation on the reasons and barriers to the adoption of new technology. A copy of the Power Point presentation is available from the secretary. Following Mark's presentation there was a discussion. Roy pointed out that there is an interactive process of getting people to adopt things. They have to internalize the situation. Awareness of a problem comes before the acceptance of technology and a solution. Carrie said that perception is a huge deal. Extension workers in populated areas could see the possibilities and needs of smaller land owners, but in other areas this was seen as the end of ranching—lemons vs. lemonade. Rang pointed out that economics issues may drive changes rather than be barriers. Analysis of hybrid corn: the rate of innovation was related to profitability. Driving forces are different between land, labor and capital. Mark pointed out that it is important to articulate to people how they will be better off if they adopt the new technology. Mark ask are we asking people to make too big a change at one time? Roy indicated that the Colorado range school was brokent up into various sections, which would build on each other from year to year. This was really helpful. The basic course has been taught 40 times and many come back after 2 years and took the next level. It was good implementation to have the range conservationist in class with the producers.

Roy and Jimmie gave a presentation on a proposed grant proposal entitled Process Based Management. Roy feels that this is a better approach to teaching techniques. When people understand the process they can manipulate it to get the outcome they want. Jimmie pointed out that landscape management and hydrology are really important. Wetlands are saved by managing water on the landscape. Landscape management is all about residue management. It's about improving the water cycle—The most important moment is when water hits the ground! It either penetrates or is lost. Without grazing, CRP does not develop as many new roots. They could increase wildlife (ducks) by using rotational grazing. You cannot sequester carbon without protein. The key structure for carbon sequestration is the deep root system (below 6 inches). Mark said that most people in agriculture are introverts. We select for a profession where we go off by ourselves to figure something out. We don't mind being alone.

The committee discussed the possibility of developing a multi-state project based on the

presentation by Roy and Jimmie. Jennifer suggested we submit a proposal to the Western Directors. They are supposed to have 20% of extension and experiment station fund in multi-state multi disciplinary projects. Where else could we go or how to get funds? Rang pointed out that all WCC's are multi-state projects. 20% of federal funds are allocated to multi-state projects, but part/most of funds are used for salaries. They are putting money into these projects, but there is no new money for operations.

After further discussion Jennifer made a motion, seconded by Chad that the Chair send a letter from the committee indicating its support for the Process Based Management project. The motion passed unanimously.

Several people on the committee expressed concern about the low turnout. It was decided that the Chair would try to contact as many of the original participants as possible and find out why they were not in attendance.

Paul agreed to continue as Chair and Chad will continue as secretary. Next years meeting date was set for January 6<sup>th</sup> in Salt Lake City. The meeting was adjourned at 4:30.

Those in attendance were as follows:

<u>Name</u>	<u>Affiliations</u>	<u>Email</u>	<u>Phone</u>
Mac Adam, Jennifer		Utah State University	jenmac@cc.us u.edu 435-797- 2364
Kennedy, Carrie	Utah State University	rangeredi@yahoo.com	360-849-0072
Miller, Joe	Idaho Rancher	None	208-756-4852
Brunson, Mark	Utah State University	Mark.Brunson@usu.edu	435-797-2458
Richardson, Jimmie	NDSU	Jimmie.richardson@nsdu.edu	701-231-8903
Roath, Roy	CSU	royr@colostate.edu	970-491-6543
Rittenhouse, Larry	CSU	Larry.rittenshouse@colostate.edu	970-491-7433
Cheyney, Charles	University of Idaho	ccheyney@uidaho.edu	208-940-0222
Nyren, Paul E.	NDSU	p.nyren@ndsdu.edu	701-424-3606
Narayanan, Rang	Univ. of Nevada-Reno	rang@cabnr.unr.edu	775-784-6649

### **Goals for 2004**

1. Develop a web page for the committee
2. Invite someone to speak to the annual meeting on "Why Don't Producers Adapt New Technology"
3. Start work on developing a multi-state research project.
4. Develop guidelines for regional testing of grazing-related forage species.

### **Accomplishments**

1. Don Snyder was to develop a web page for the committee but later was told that Utah State could not host such a web site. Paul Nyren is now developing the web site that will be located on the NDSU server.
2. Dr. Mark Brunson and Ms. Carrie Kennedy attended the meeting and Dr. Brunson gave an hour long talk on reasons and barriers to the adaptation of new technologies. Following Mark's talk there was a lengthy discussion on the topic and what we can do to assist in the adaptation of change.
3. Dr. Roy Roth, Colorado State Univ. and Dr. Jimmie Richardson, North Dakota State Univ. Gave a presentation on Processes Based Management . The committee voted unanimously to write a letter of support for this multi-state research proposal.
4. Glenn Shewmaker has developed a draft Protocol for regional testing of grazing-related forage species. Since Glenn was unable to attend the meeting no further action was taken on this item.

### **Impact Statements**

North Dakota State University, Central Grasslands Research Extension Center received a SARE grant for a two year project to demonstrate Best Management Practices on a model farm, to work one-on-one with producers to establish rangeland monitoring programs on their ranches and work with the GLCI to incorporate rangeland monitoring in the producer mentoring progra. This project will have extensive producer participation.

In the belief that the taxpayer are the stakeholders in the Land Grant system the Central Grasslands Research Extension Center has developed an annual report that is widely distributed across the region as an insert in several local news papers and in a trade paper the Western Livestock Reporter. Fourth Thousand copies of the report are distributed in this manner.

Participants in extension workshops, classes and consultations significantly changed their perspective and understanding of ecosystem principles leading to improved management of irrigated pastures. Improved understanding resulted in increased economic sustainability, through improved productivity, reduced purchased and fossil fuel inputs and reduced potential for undesirable impacts on land and water resources.

In Valley County, as a result of no-till planting demonstrations, the cooperators has selected an appropriate herbicide to suppress growth before no-till drilling, and now intends to do all of his future pasture and alfalfa planting with a no-till drill, reducing the use of fossil fuel and lowing the risk of significant erosion.

Pre- and post- testing at the LRGA indicates that all 36 participants increased their understanding of pasture ecosystems and management. All participants indicated that they had learned things at the LRGA that they intended to implement on their farm or ranch in the next 6 months. Several individuals who have attended the IRGA have reported greatly improved harvesting efficiency from implementing the principles that they learned.

One operator from the Mackay area had been contemplating haying 86 acres of poorly irrigated ground. As a result of what he learned at the LRGA, he decided to graze the area instead. This resulted in an increased additional \$600 in net profit over what had been anticipated from haying the land.

Another operator, from the Salmon area, reported that he was unable to barrow funds to put up hay on his ranch in 2003. He decided to implement what he had learned at the IRGA. By stock piling feed as standing feed during the summer and rationing it out during the winter, he determined that he saved him \$10,000 to \$15,000 in 2003, and permitted him to stay in business and actually flourish. During 2004 he stockpiled forage again, and it appears that he may not have to feed any hay during the winter of 2004-05.

### **Publications:**

- Entry, J.A., R E. Sojka, and G.E. Shewmaker. 2004. Irrigation Increases Inorganic Carbon in Agricultural Soils. *Environmental Management* 33: Supplement 1, S309-S317. Shewmaker, Glenn E, Twin Falls R&E Center (District 3 Office)
- Entry, J.A., J.J. Fuhrmann, R E. Sojka, and Glenn E. Shewmaker. 2004. Influence of Irrigated Agriculture on Soil Carbon and Microbial Community Structure. *Environmental Management* 33: Supplement 1, S363-S373.-Shewmaker, Glenn E., Twin Falls R&E Center (District 3 Office)
- Hines, Steven L. and T. S. Prather. 2004. Oxeye Daisy (*Leucanthemum vulgare* Lam.). PNW Weed Bulletin. ( In Press)-Hines, Steven L., Valley
- Griggs, T. C. 2004. Alfalfa Variety Selection Guidelines. AG/Forage & Pasture/2004-02.
- Griggs, T.C., S.C. Fransen, and M.G. Bohle. 2004. Hay Quality Sensory Evaluation Form – Alfalfa. AG-Forage & Pasture/2004-03.
- Griggs, T.C., S.C. Fransen, and M.G. Bohle. 2004. Hay Quality Sensory Evaluation Form – Cereal. AG-Forage & Pasture/2004-03.4.
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- Griggs, T.C., S.C. Fransen, and M.G. Bohle 2004. Hay Quality Sensory Evaluation Form - Mixed Cereal/Pea or Vetch. AG-Forage & Pasture/2004-03.5.
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- Griggs, T.C., J.W. MacAdam, H.F. Mayland, and J.C. Burns. 2005. Nonstructural carbohydrate and digestibility patterns in orchardgrass swards during daily defoliation sequences initiated in evening and morning. *Crop Science*, *in press*.
- Griggs, T.C., J.W. MacAdam, H.F. Mayland, and J.C. Burns. 2004. Daily carbohydrate and digestibility patterns in orchardgrass sward horizons. *In Annual Meetings Abstracts [CD-ROM]*. ASA, CSSA, and SSSA, Madison, WI.

- Griggs, T.C., J.W. MacAdam, H.F. Mayland, and J.C. Burns. 2004. Integrating daily patterns of pasture soluble carbohydrate level and grazing behavior. *Proc. Pacific Div., Amer. Assn. Advance. Sci.*, 23: 50.
- Griggs, T. C. and K. Pack. 2004. Guidelines for Visual Assessment of Herbage Mass in Pastures. *AG/Forage & Pasture/2004-01*.
- Griggs, T.C., R.F. Sessions, M.J. Bouck, J.S. Murdock, D.A. Chandler, and R.E. Whitesides. 2004. Irrigated Alfalfa Variety Performance, 1999-2002; Kaysville, Utah. *Ag/Crop Trials/2004-03*.
- Jeppson, R.N. and J. W. MacAdam. 2004. Effects of saline irrigation and rooting media organic matter on growth and development of two western native perennials. *Proc. Pacific Div., Amer. Assn. Advance. Sci.*, 23:55
- MacAdam, J. W. and A. L. Barta. Irrigation and water management, *In* R. F. Barnes, C. J. Nelson, M. Collins and K. J. Moore (ed.) *Forages. An Introduction to Grassland Agriculture, Vol II, 6<sup>th</sup> Ed*, Iowa State Press, Ames. *in press*
- MacAdam, J. W., T. C. Griggs and G. J. Mileski. 2005. The interaction of management with botanical composition of irrigated grass-legume pasture mixtures in the Intermountain West USA. *Proceedings of the XX International Grassland Congress, Dublin, Ireland, 26 June-1 July 2005. In press.*
- MacAdam, J.W., T.C. Griggs, and G.J. Mileski. 2004. Productivity of grass and legume components in irrigated pastures under rotational stocking in the Intermountain West. p. 450 *In* K. Cassida (ed) *Proceedings of the American Forage and Grassland Council, June 12-16, 2004, Roanoke, VA.*
- MacAdam, J.W., T. C. Griggs, G. Mileski, and S. Buffler. 2004. Long-term changes in botanical composition of rotationally stocked irrigated grass-legume mixtures. *In* *Annual Meetings Abstracts [CD-ROM]*. ASA, CSSA, and SSSA, Madison, WI.