

Exhibit Number: 1

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EXHIBIT 1
DATE 2/8/05
HB 4511

Minutes of the NPARL Focus Group meeting held Nov. 29, 2004 in Sidney, MT.

MINUTES:

Focus Group Chair Warren Johnson opened the meeting at 1:05 p.m..

Lab / Research Updates:

Focus Group members heard presentations from Agricultural Systems Research Unit (ASRU) Leader Robert Evans and Pest Management Research Unit (PMRU) Leader Tom Shanower, updating them on activities at the lab. (See below for more.) Members also heard research reports from ASRU Weed Ecologist Andy Lenssen and PMRU Entomologist Dave Kazner and Botanist John Gaskin.

Bob Evans' ASRU Update: Discussed activities in ASRU over the past year, pointing out the arrival of three new scientists – Andy Lenssen, Jed Waddell and Upendra Sainju – and the anticipated arrival of two more in January/February 2005 – Agronomist Bart Stevens and Soil Scientist Jay Jabro. He also discussed new construction completed in 2004 including a new equipment storage shed built at the Froid Research Farm by the Roosevelt and Sheridan County Conservation Districts, and the remodel of the "Sample Prep" area at Sidney. He also reported the onset of construction of a heated shop at the Sidney site. Among the ASRU research highlights noted were:

- Initiation of a major new cropping systems research experiment at the Rasmussen site, a multi-disciplinary effort with 120 different plots.
- Initiation of a CRADA on biological control of Cercospora Leaf Spot with a Missoula company, as well as the identification of safflower as an alternate host.
- Initiation of new studies on malting barley, dryland field peas and dryland weed ecology.
- Identification of numerous bacterial species important to soil aggregation on tilled, irrigated soils.
- Reported first-year data on sprinkler irrigated sugarbeets that indicates yields are not significantly different between strip and conventional tillage.

He also outlined future ASRU needs, including funding for operation and maintenance of new greenhouses scheduled for construction this spring; addition of a weed ecologist to focus on irrigated crops; addition of a machinery storage shed at Sidney, and a remodel of the North Building (originally built in the 1960s). First and foremost, however, he stressed the need to retain existing budget and position allocations for the lab as a whole, since rising federal deficits in other areas may prompt new cuts in FY 06.

Tom Shanower's PMRU Update: Discussed activities in PMRU in 2004 including changes in personnel with Gerry Anderson moving from ASRU to PMRU and two technicians leaving. Coming soon are two new technicians working with Dave Branson and Tony Caesar. He also described research highlights from the previous year including findings that:

- Overwintering-nymph grasshopper species do not reduce populations of later hatching species and that raw canola oil is highly attractive to grasshoppers.
- Earlier theories regarding Mormon cricket migration being influenced by morning wind direction were disproven.

- DNA studies are demonstrating higher levels of genetic diversity in wheat stem sawfly populations and that there are actually three different species of saltcedar leaf beetles among populations released as biocontrol agents against saltcedar.
- Certain strains of *Fusarium* pathogen can attack and reduce biomass of whitetop.

He concluded his presentation with a brief discussion of the political environment (bleak) as it pertains to funding for ag research because of other administration priorities, among them deficit reduction, war on terror, tax cuts and Social Security changes. According to ARS officials, the President's FY06 budget is expected to once again contain language rescinding money previously granted over the past few years. Similar provisions in the president's FY 05 plan would have reduced the Sidney lab's budget by 43% if it had been approved. However, Congress stepped in to prevent that from happening and is likely to do so again, but it may mean little new money provided for research needs in the coming year. But those needs remain, and he concluded his update by outlining the opportunities and needs for the pest management unit in the near future, while noting in particular the need to retain existing programs, and pointing to the opportunity offered by the upcoming construction of the new quarantine and greenhouse facility at NPARRL. That facility not only represents the completion of the planned merger of the Sidney and Bozeman ARS research labs begun in 1995, but will also enable PMRU to lead biological control projects from start to finish. It will also allow PMRU to speed release of promising agents by 2-to-3 years in what is normally a 10+ year effort. However, to accomplish that goal and expand research to other target weeds additional scientific personnel will be needed. He identified them as an entomologist/quarantine specialist to oversee the new facility and a plant physiologist/ecologist to study the impact of biological control agents on weed population dynamics, particularly ecosystem and habitat rehabilitation following successful biological control. Also sorely needed is additional funding for maintenance of the new facility and particularly the new greenhouse space which will be expensive to heat.

Andy Lenssen's Presentation: Discussed ASRU dryland research projects at Rasmussen's and Froid along with weeds research and the Sustainable Pest Management research begun with Montana State University, studying replacement of summer fallow with annual forages in durum rotations. Results of the SPM trials to date indicate yields of 2 plus tons of forage vs. a 10-15 bushel/ac reduction in durum yields.

John Gaskin and Dave Kazmer's presentation: Discussed ongoing research in the biological control of saltcedar and the success of *Diorhabda elongata*, the Chinese leaf beetle, as a biological control agent for the weed. Discussion also noted findings from DNA analyses that show garden saltcedars are not the source of the Montana invasion, but are found at low levels in those invasions. (The Sidney lab is one of only a very few labs doing this type of DNA work and so are called on to help out other programs as well including work on yellow starthistle from California and teasel from the Midwest and eastern U.S.)

Research Overviews from Mandan, ND and Miles City, MT ARS labs:

No representative from Mandan was present, but Rod Heitschmidt, Research Leader and Range Ecologist with the USDA-ARS Fort Keogh Livestock and Range Research Laboratory in Miles City, provided Focus Group members an overview of his lab and the work done there. Highlights of the presentation included:

- Listing of resources and personnel, which included 49,700 acres of native rangeland; 2,700 acres of dryland pasture; 1,400 acres of irrigated pasture and cropland, 47 buildings, 21 wells, 2 feedlots; 1200-1500 head of mother cows and 400 miles of fence.
- Listing of research efforts and personnel under two broad categories: 1) Development of beef cattle better suited for sustainable beef production and 2) Low risk/low input management strategies for sustaining range beef cattle production systems.
- Sample research programs include studies in breeding systems and synchronization; reproduction; rangeland nutrition and management strategies; fire and grazing ecology, noxious weed nutritional value and grazing and drought management.

Discussion centered largely on potential for development of joint irrigated forage/pasture research. While possible, Heitschmidt noted, the effort would be very difficult because of the many variables involved (see further discussion below). He also pointed to distance as a stumbling block for cooperative research efforts between the two labs.

Committee Discussions: *All three FG committees met as Committees of the Whole (Research, Financial Support, and Public Relations/Education) during the general meeting.*

Research Committee: Jim Squires opened the discussion by asking each member present what they liked about the afternoon's presentations, followed up by what they would like to see in the future, particularly in the way of possible collaborations with area ARS labs. Comments from members were positive with several members citing new research work in the Ag Systems Unit as directly applicable to area producers. Summing up the sentiment, Tom Rolfstad noted that he liked the "macro and micro development" of the research projects at NPARL with some projects definitely having more national impact and others with more local benefits that area producers can use today. Other comments included appreciation of NPARL's leading edge nationally in several research programs. However, Larry Simonsen also pointed out that ag research is not happening in a vacuum and that if current agricultural trends pointing to ever larger operations continue, we may eventually "have all the research we need, but no one to use it." While he expressed appreciation for research progress, he noted that it is getting ever more difficult for family farmers to be successful, particularly over succeeding generations. Other comments on what members would like to see in the future, and possible collaborations with Miles City, included:

- Examination of water use efficiency.
- Center pivots for pasture research. While worthy of additional study, Bob Evans noted that talks to date with Miles City have pointed out the difficulty associated with this research because of the many variables involved (i.e. differences in stocking rates, management systems, soil quality and grass species just to name a few). Distance between the two facilities is also a factor although, he noted, it might be possible to lease land near Glendive for the purpose, but that additional people would be needed to conduct the research.
- Use of some dryland crops as forage (peas) or raising some under spray irrigation
- Need to dovetail NPARL research efforts with the new Conservation Security Program and other conservation programs, which appear to be the wave of the future.
- Need to focus on both farming and ranching, since both are here... also a reason to be talking to Miles City.
- Need for more rangeland surveys (and weather stations) here in order for Richland County producers to participate in some government conservation programs.

Action Items: Invite scientists from other labs to Sidney to give Brown Baggers. Possibly meet with Fort Keogh researchers/Focus Group at Miles City in the future.

Financial Support Committee: Don Steinbeisser led the discussion which focused on the strong threat of budget cuts expected in the President's FY 06 budget. Maintaining existing funding will have to be a priority. Anticipated threats to funding for existing NPARK programs could, if enacted, lead to a loss of more than \$1.2 million dollars and as many as nine jobs at the Sidney lab. However, Congress has typically put back the money for existing programs during its budget reviews in January and February. While stressing the need to keep current funding levels, several members said it was also important to keep moving ahead and recommended the group continue with plans to pursue the new personnel funding requests for the PMRU program (quarantine specialist and plant ecologist), as well as the operating funds for the new quarantine and greenhouse facilities, and the funding for a feasibility study of the North Building remodel. Members also mentioned seeking support from various farm and agribusiness organizations with which they are involved, among them Busch Ag, American Crystal and Farmers Union. Tom Rolfstad also suggested getting the Montana and North Dakota congressional delegations information on the lab. The Finance Committee agreed to meet sometime before or in early February to further discuss plans to seek funding for lab needs (see new business below)..

Public Relations / Education Committee: Chair Bret Smelser asked Beth Redlin to lead the discussion, which included information on upcoming outreach events for 2005 as well as reports on 2004 events. The discussion included the following suggestions from members:

- o Invite researchers from other facilities to speak at NPARK Brown Baggers. Names locations suggested included Elaine Griggs with Fort Keogh, Eric Moen at and representatives from research facilities located in Hettinger, ND and Moccasin, MT.
- o Have NPARK representatives available to speak before civic organizations in outlying communities such as Williston, in addition to Sidney.
- o Consider developing a cooperative educational effort with Fort Union, perhaps in weeds, to get NPARK's name and expertise out to larger audiences also impacted by the work we do.

Action Items: See above suggestions.

Old Business:

- Group is still considering future meetings with Focus Group leadership from other labs. For now, Focus Group Chair Warren Johnson and Research Committee Chair Jim Squires have said they would like to attend the Mandan Field Day this coming summer and possibly meet with their Customer Focus Group at that time.

Action Item: Beth will check with Cal Thorson at Mandan to see whether their Focus Group is willing to have them participate.

New Business:

- *Local Initiatives:* The group agreed to support funding for two new PMRU positions along with additional operating money for the new quarantine facility. The group also agreed to seek additional funding for the feasibility study for remodeling of the North Building at the

Sidney lab site. First and foremost, however, will be retention of existing personnel in the face of anticipated budget cuts.

- *Regional Initiatives:* The group will continue to examine collaborative efforts with surrounding laboratories.
- *Elections:* Jim Squires was re-elected as Research Committee Chair. Buzz Mattein was elected as the New Finance Committee Chair. Bret Smelser was re-elected as the Public Relations and Education Committee Chair. Warren Johnson was re-elected as Focus Group Chair. All terms are for one year.

Next meeting:

The group agreed to hold two meetings in 2005, first a summer meeting to be held prior to the start of the Froid Research Farm tour in late June 2005 (date and time yet TBA) and then an annual winter meeting, which members agreed to hold regularly on the first Monday after Thanksgiving.

Adjournment

The meeting adjourned at the scheduled time.



Northern Plains Agricultural Research Laboratory
United States Department of Agriculture
Agricultural Research Service

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Voice: 408-433-2929 • FAX: 408-433-5038

<http://www.sidney.ars.usda.gov>

WEBSITES General NP-ARL Web Site; Includes information on station research programs, personnel and policies. See inside, for more.

THE SALICEDAR PROBLEM

Salcedar was introduced from Eurasia in the early 1800s for erosion control and use as an ornamental/shade tree. Since that time, this rapid growing deciduous shrub or tree has proven to be an extremely aggressive invader of riparian areas throughout western North America. Salcedar displaces desirable plants such as willows and cottonwoods and often forms near monotypic infestations. High water use by salcedar is responsible for lowering of water tables and depletion of standing or running water in reservoirs, lakes, streams and rivers. High rates of salt deposition on the soil surface lead to saline soils that are not

conductive to growth of desirable, native plants. Domestic livestock and wildlife usually do not utilize salcedar for forage or cover.



BIOLOGICAL CONTROL

Salcedar is extremely difficult and costly to manage using chemical and mechanical controls. Consequently, a biological control program for salcedar was initiated in the late 1980s to find and develop natural enemies that would provide cost-effective, long-term and broad-scale suppression of salcedar. Although initial testing of some biological control agents was completed by 1994, objections to the salcedar biological control program, particularly those relating to an endangered bird species that nests in salcedar in some parts of its range, delayed further progress. However, in 1998, permission was granted to proceed with an experimental release program in areas where the endangered bird species does not occur.

SALICEDAR LEAF BEETLE

THE HOST PLANT

The host plant is Salix, a genus of shrub and tree species that are common in riparian areas throughout western North America. Salcedar is a species of Salix that is native to Eurasia and was introduced to North America in the early 1800s for erosion control and use as an ornamental/shade tree. Salcedar is a highly invasive species that has become a major problem in riparian areas throughout western North America. Salcedar displaces desirable plants such as willows and cottonwoods and often forms near monotypic infestations. High water use by salcedar is responsible for lowering of water tables and depletion of standing or running water in reservoirs, lakes, streams and rivers. High rates of salt deposition on the soil surface lead to saline soils that are not

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Egg cluster

1st and 2nd instars

3rd instar

Diorhabda elongata

lays its eggs in masses of 2-20 on foliage and hatch in about 7-10 days. Larvae the soil surface. Development from egg to adult takes about 3-4 weeks.

FUTURE DIRECTIONS

A large-scale release program for *Drosophila* will be initiated in spring of 2004 in northern states including Montana, Wyoming and North and South Dakota. Different strains of *D. elongata* that may survive in southern states were released in 2003. Additional agents that attack *Drosophila* in different ways are currently under review for field release.

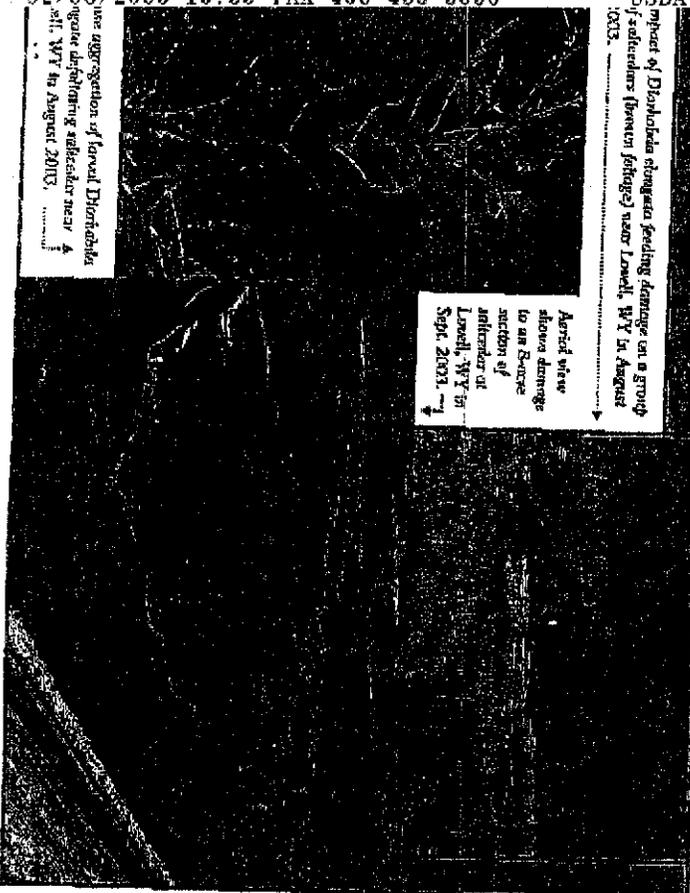


Satellite imagery over a million acres in the western United States producing black, impenetrable stands that flow one along the Big Horn River in northern Wyoming.

USDA-ARS
 impact of *Drosophila elongata* feeding damage on a group of sediments (brown patches) near Lowell, WY in August 2003.

Aerial view shows damage to an 8-acre section of alfalfa at Lowell, WY in Sept. 2003.

Use aggregation of larval *Drosophila* to locate and identify sites near Lowell, WY in August 2003.



For More Information:

Dana Kazner, Research Entomologist
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Current Regional Collaborators:

- USDA-APHIS-PPQ
- Region 6/Region 7/Region 8/Region 9/Region 10/Region 11/Region 12/Region 13/Region 14/Region 15/Region 16/Region 17/Region 18/Region 19/Region 20/Region 21/Region 22/Region 23/Region 24/Region 25/Region 26/Region 27/Region 28/Region 29/Region 30/Region 31/Region 32/Region 33/Region 34/Region 35/Region 36/Region 37/Region 38/Region 39/Region 40/Region 41/Region 42/Region 43/Region 44/Region 45/Region 46/Region 47/Region 48/Region 49/Region 50/Region 51/Region 52/Region 53/Region 54/Region 55/Region 56/Region 57/Region 58/Region 59/Region 60/Region 61/Region 62/Region 63/Region 64/Region 65/Region 66/Region 67/Region 68/Region 69/Region 70/Region 71/Region 72/Region 73/Region 74/Region 75/Region 76/Region 77/Region 78/Region 79/Region 80/Region 81/Region 82/Region 83/Region 84/Region 85/Region 86/Region 87/Region 88/Region 89/Region 90/Region 91/Region 92/Region 93/Region 94/Region 95/Region 96/Region 97/Region 98/Region 99/Region 100

USDA-ARS Northern Plains

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United States Department of Agriculture

Agricultural Research Service

As the principal in-house research arm of the U.S. Department of Agriculture, ARS conducts research to develop and transfer solutions to agricultural production of high national priority and provides information services and assistance to:

- Ensure high quality, safe food and other agricultural products
 - Assess the nutritional needs of Americans
 - Sustain a competitive agricultural economy
 - Enhance the national resource base and the environment, conservation, and society as a whole.
- For more information about ARS, visit the web site at <http://www.ars.usda.gov/>



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BIOLOGICAL CONTROL PROGRAM

SALT CEDAR

NPARI web sites

www.sidney.ars.usda.gov

General NPARI site includes information on research programs, personnel and policies. Also includes a kid's page, photo gallery and the lab's newsletter, the "Northern Plains Facts."

www.team.ars.usda.gov

TEAM Leaflet Spurge site includes lots of information on integrated pest management strategies to control the noxious weed leafy spurge.

www.sidney.ars.usda.gov/prosthopper/

This site is among the most comprehensive sources of information on grasshopper biology, identification and management useful for researchers, extension agents, ranchers, land managers and the general public alike. Includes updated outbreak information.

www.sidney.ars.usda.gov/hortycress/

The newest addition to NPARI's line-up, this web site highlights the work of the Henry Cress Consulting, which is researching the biological control of the noxious weed.

weather.sidney.ars.usda.gov

This weather network provides hourly weather information including air, soil and water temperatures and precipitation levels from 10 Mandak area sites and 4 substations.

- USDA-ARS Northern Plains Agricultural Research Laboratory
- Agricultural Systems Research Unit
- Pest Management Research Unit

United States Department of Agriculture
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- Ensure high quality, safe food and other agricultural products
- Assess the nutritional needs of Americans
- Sustain a competitive agricultural economy
- Enhance the national resource base and the environment, and
- Provide economic opportunities for rural citizens, communities, and society as a whole.

For more information about ARS, visit the web site at <http://www.ars.usda.gov/>

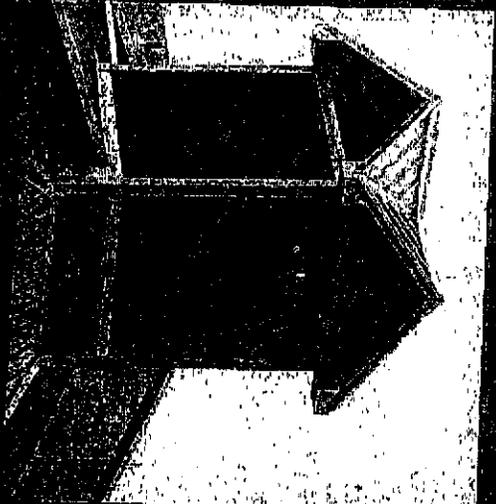


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NPARI

NORTHERN PLAINS AGRICULTURAL RESEARCH LABORATORY



NPARI
Northern Plains Agricultural Research Laboratory

NPARI

United States Department of Agriculture
Agricultural Research Service

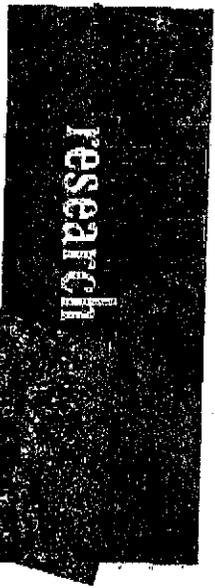
NPARI goals

...to develop and implement ecologically-based strategies, technologies, and products for the management of crops and rangeland in sustainable agricultural and natural resource systems.

NPARI activities focus on the northern Great Plains, but have nationwide and international implications.

The research emphasis is on soil and water stewardship, and the biological and cultural management of insects, pathogens, and weeds within production systems that enhance profitability and environmental quality.

Seventeen scientists currently work in two research units. They include the Pest Management Research Unit (PMRU) where scientists study new ways of dealing with insect and disease, insect and weed pests, and the Agricultural Systems Research Unit (ASRU) which works to increase production and economic viability of diverse, irrigated dryland and irrigated cropping systems in the Northern Great Plains.



research

Scientists in this unit

combine talents in agronomy, soil science, pathology, microbiology and agricultural engineering to optimize use of natural resources and farming inputs that improve water and soil quality in both dryland and irrigated systems, while alleviating pest and disease problems. ASRU researchers are also developing biologically-based techniques to combat plant diseases, applying remote sensing techniques to measure crop nutrient status and to map the extent of weed and disease problems, and refining irrigation techniques with high water use efficiencies and low environmental impacts.

Soil Management

- Alternatives to Wheat-Fallow Rotation
- Managing to Improve Soil Quality
- Precision Ag

Cropping Systems

- Profitable Alternative Cropping Systems on Dry and Irrigated Land
- Irrigation Research
- Biological Control of Cercospora Leaf Spot of Sugar Beets



research

Scientists in this unit

combine talents in entomology, ecology, pathology, microbiology, and botany to develop biologically based approaches to pest control for both weed and insect pests. Research areas include:

Weed Biological Control

- Classical Biological Control for Selected Invasive, Exotic Weeds
 - Leaky Spurge
 - Knapweed
 - Whitetop
 - Saltcedar
- Augmentation of Biological Control Agents

- Impacts of Biological Control Agents on Biodiversity and Ecosystem Dynamics

Insect Pest Ecology and Management

- Grasshoppers
- Mormon Cricket
- Wheat Stem Sawfly
- Sugar Beet Root Maggot
- Orange Wheat Blossom Midge



Fort Keogh
Livestock and Range Research Laboratory

[Home](#)

Introduction to Fort Keogh

by

Dr. Rod Heitschmidt

Research Leader

It is my privilege to both welcome and introduce you to *Fort Keogh*. As such, I will briefly review our history as a military fort and research laboratory and provide an overview of our resources and administrative structure.

Military History - Fort Keogh was established by Congress as an Army Cavalry post on July 22, 1876, approximately one month after the Battle of the Little Bighorn. The 100 section (64,000 acres) Fort was named after Captain Myles Keogh, an adjutant to General Custer at the Battle. The initial commander of Fort Keogh was General Nelson Miles for whom Miles City is named.

In 1907, all infantry troops were withdrawn from the Fort and in 1909 it was designated a Remount Station. Reportedly, more horses were processed at Fort Keogh than any other Remount Station during World War I. The Army relinquished the land in 1922 and following the complete withdrawal of all military personnel in 1924, Congress transferred Fort Keogh to the U.S. Department of Agriculture for the purpose of conducting