
Precision Agriculture Research Association

Vol. 1 No. 6

January 1, 2001

Dear members and potential members,

The Precision Agriculture Research Association (PARA) idea originated with a group of producers who had been working in the realm of site-specific farming issues. Many of these producers had projects with MSU faculty. With support from MSU staff and UMAC (Upper Midwest Aerospace Consortium), PARA was established in January 1997 as a non-profit organization, producer-driven, with the goal of sharing and helping each other accomplish various GPS/GIS tasks. In the fall of 1998, Chuck Merja was successful in getting a group of producers together to begin sharing ideas and needs. The group decided to take the concept of PARA, which was already in place, and become active.*

Since that time, several producers, faculty and students have evolved into a learning group. The learning group conducts on-farm, field-scale research. This group decided they needed capabilities for sharing data using similar software, especially for analysis and map making. The GIS package picked by the learning group is SSToolbox (SST). The group is beginning its third year working with SST.

During the 2000 growing season, the learning group participated in a project sponsored by NASA-Raytheon to determine whether remote sensing images (downloaded using a DirecPC satellite dish) could assist management decisions. Raytheon has indicated that they would like to renew funding for the 2001 growing season. At a recent project meeting held in Bozeman, producers and ranchers stated the Landsat and NDVI imagery provided by the project was too coarse for some applications. We will be looking at higher resolution IKONOS, Earthscan, and aerial imagery to augment the imagery provided through the project.

Even if you do not have DirecPC, you can download weekly remote sensing images of vegetation from (<http://www.umac.org/farming/ndvi.html>). If you would like more information about how to view these images using free software from ESRI or ERDAS, or if you would like to know where you can get Montana data for free, contact Chris Erlien (cerlien@montana.edu).

The PARA site can be found at <http://www.montana.edu/places/para>. There are back issues of the newsletter posted, as well as links to other sites, information on the officers and directors, and more. Please contact Chris Erlien if you have any questions, comments, or suggestions for additions to the site.

**Membership Information can be found on page 4 of this newsletter.*

PARA Research Opportunities

PARA and the learning group are major participants in the direction of MSU precision agriculture research, including research grant proposals. Perry Miller is currently working on a carbon sequestration proposal with other UMAC researchers. The proposal, entitled "Evaluating Farm Management Practice to Enhance Carbon Sequestration in Agro-ecosystems of the Northern Great Plains using Multi-seasonal Thematic Mapper Imagery," was submitted to NASA in January.

Some PARA members have banded together to buy a camera that will enable them to take high-resolution near-infrared (NIR) photos. The purchase was made so that involved producers can get frequent, high spatial resolution photos. These photos, combined with historic weed, VERIS and yield maps will allow fields to be monitored for weed outbreaks, productivity potential differences, etc. The involved producers are looking to either apply for a grant that would help support aerial flight costs or to integrate more producers along the flight path into the group. Interested parties should contact Gary Arnst (406-279-3522; arnst@3rivers.net) or Chuck Merja (406-264-5955; chuckm@3rivers.net)

Several PARA members (MSU faculty and NRCS associates) are pursuing methods of creating better, faster, cheaper soil information systems (soil attribute maps) to serve precision agriculture, providing data for models that predict crop yield, crop quality and soil carbon sequestration.

Producers interested in forming new learning groups that focus on either range management or irrigation agriculture should contact Chris Erlien (cerlien@montana.edu; 406-994-6034).

Meetings

PARA's February meeting has been scheduled for February 21, 2001 in Great Falls. The meeting will begin at 9:00 am in the Wheat Building. DeImna Heiken will demonstrate the latest Trimble equipment

Master Calendar

Western Precision Agriculture Conference

Pasco, Washington

January 29-31, 2001

<http://capps.wsu.edu/programs/WPAC01.htm>

"This conference provides the broadest, most comprehensive information about precision farming in the western U.S. Learn how to maximize profitability by matching crop production practices and inputs to the needs of each unique field area."

Second International Wheat Quality Conference

Manhattan, Kansas, USA.

May 20-24, 2001

<http://www.usgmrl.ksu.edu/iwqc-ii/>

The Second International Wheat Quality Conference (IWQC - II) is scheduled for May 20-24, 2001 in Manhattan, KS, USA. The Conference is being organized by the USDA-ARS Grain Marketing and Production Research Center, Kansas State University and the American Institute of Baking. Conference endorsements by the American Association of Cereal Chemists (AACC), the Manhattan Section of AACC, the International Association for Cereal Science and Technology (ICC) and the American Society of Agricultural Engineers (ASAE) are being sought.

Election of new officers

New officers will be elected to a 2-year term at the February meeting.

Current officers

President Carl Mattson

Vice president Mike Choriki

Secretary/Treasurer Bruce Wright

Directors Steve Raska, Gary Arnst

Please send nominations to Janice Mattson (geoag@mcn.net)

Annual Membership Dues

Membership to the PARA organization is open to the public. Presently, members include producers, ag industry, and university academia. It is felt we can learn from each other no matter what our experience has been in site-specific farming. Anyone wondering if PARA is an organization that can provide something to them in their pursuit of precision farming are welcome to attend a meeting and then make a commitment. PARA's annual dues are \$100 per representative per year. The new year begins January 1, 2001.

Those wishing to submit their dues, please print this page and supply the following information:

Name:

Organization:

Address:

Town:

State:

Zip Code:

Phone:

e-mail:

Also include a check or money order for \$100 made payable to PARA and mail to either of the addresses below:

PARA
P.O. Box 5326
Bozeman, MT 59717

Bruce Wright, PARA Secretary/Treasurer
PO Box 664
Belgrade, MT 59714