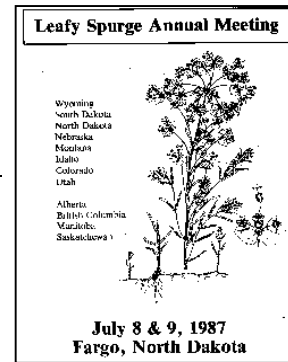


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**GPC-14 Leafy Spurge Control in the Great Plains
July 7-9, 1987
Doublewood Inn, Fargo, North Dakota**



Introduction / Program / Minutes

Introduction

DAVID G. DAVIS

Chairman, 1987 GPC-4 Committee, USDA/ARS, Fargo, ND, 58105. New telephone number: (701) 239 1247.

These proceedings are the latest information on much of the research being conducted in the Northern United States pertaining to the control of leafy spurge. These meetings have been held annually since 1979 and have served to gather scientists of several disciplines from government, universities, industry, farms and ranches, as well as individuals involved in Nature Conservancies, in which leafy spurge is becoming an increasing problem. A meeting on spurge control in one of their conservation areas by the Minnesota Nature Conservancy soon after these proceedings attests to the importance of leafy spurge research in their programs, also, and the need to communicate research results as soon as possible. These proceedings are intended for rapid publication to communicate ongoing research. In fact, the term rapid communication applies mostly to the technical reports printed at the end of this publication, since they are synopses of the most recent field trials from Montana, North Dakota and Wyoming. The first part of this publication consists of abstracts of papers presented at the symposium in Fargo in July 1987, and their publication was delayed purposely to contain all of this information in the same booklet. A few extra copies of these proceedings will be available to those who contact me.

Contributions from other states and Canada have been a significant part of the proceedings in past years, and it is hoped that in future years this will continue. Individuals from California, Colorado, Idaho, Minnesota, Nebraska, Maryland, North Carolina, Pennsylvania, South Dakota, and Texas attended the Fargo meetings and contributed to the discussions, but all except Dr. Lee Miller (Univ. Nebraska) chose not to present formal talks. In an unscheduled talk over lunch, Dr. Lloyd Wendell, USDA/APHIS, Mission, Texas, summarized the role that APHIS will be playing in the near future. The

shifting of much of the biocontrol work from Albany, CA to Bozeman, MT was of special interest.

The 1988 meeting is scheduled for 12-13 July at Rapid City, SD. Dr. Dennis Clarke, 804 Plum Drive, Pierre, SD 57501 is Chairman and organizer. This is the first time the meetings will be held in South Dakota. It is hoped this information will be passed on to those who might not receive these proceedings. We have discussed the possibility of having Brainstorming Sessions at the South Dakota meetings, to come up with new ideas. It should be an interesting program, with a visit to Mt. Rushmore as a highlight. Since the Black Hills is a vacationland, perhaps that will entice a few more individuals to attend who might otherwise be hesitant.

I wish to thank all of the individuals involved in organizing and helping with the Fargo meetings, and of course to the speakers at the symposium. Special thanks are also due to Dr. Rodney Lym, Dr. Claude Schmidt, Dr. Russell Lorenz, Dr. Cal Messersmith and the North Dakota State University Agronomy Department for their assistance. Mrs. Jeanette Kraft, Mrs. Brenda Jacobson and Mrs. Geraldine Schmidt were extremely helpful. The Fargo Visitor's Bureau and of course the Doublewood Inn also assisted greatly in organizing the meetings.

Program

Tues, July 7 - all day - N. Dak. State Univ. Weed Control Field Plots: AM at Casselton, PM near NDSU

7:00-9:00 PM Registration and Social Hour - Doublewood Inn.

Wed. July 8 - morning session:

- 6:30 Group Breakfast
- 7:30 Registration - 7:30 - 12:00
- 8:30 Introduction - D. G. Davis, Chairman GPC 14 committee.
- 8:40 History - R. Lorenz, ARS collaborator/NDSU Range Science. How we got where we are in leafy spurge.
- 8:50 Public Relations - Wayne Colberg Cass County Weed Officer.
- 9:05 Mapping Systems - R. Elliston (Supervisor, Cook County WY Weed and Pest Control Board) and L. E. Miller (Professor and Remote Sensing Coordinator, Univ. Nebraska) Mapping leafy spurge with airborne color video and microcomputer image processing.
- 9:20 Coffee
- 9:45 Growth of Plants - Davis, David G. and Martin Blankendaal. Problems with artificial media for greenhouse plants.

- 10:00 Biocontrol - Carlson, Robert B. and Donald A. Mundal. Development and overwintering of gall midge and flea beetles from 1986 releases.
- 10:15 Fay, Peter K. Electronic goat herding for leafy spurge control.
- 10:30 CHEMICAL WEED CONTROL:
- 10:30 DiTomaso, Joseph M. The effect of sulfometuron-methyl and 2,4-D combination on leafy spurge.
- 10:45 Hickman, Michael and Calvin G. Messersmith. Picloram release by leafy spurge roots.
- 11:00 Lym, Rodney G. and Calvin G. Messersmith. Leafy spurge control in North Dakota - 1987.
- 11:15 Moxness, Kevin, and Rodney G. Lym. Absorption and Translocation of ¹⁴C picloram in leafy spurge.
- 11:30 Swenson, O. R. and Rodney G. Lym. Leafy spurge control and soil residue with sulfometuron.
- 11:45 Whitson, Tom D. and M. A. Ferrell. Control of leafy spurge with fluoxypyr.
- 12:00 Lunch - Doublewood

Wed, July 8 - afternoon session:

- 1:15 WORKSHOPS - To meet in separate rooms. One individual will be assigned as a recorder to provide a brief synopsis of each workshop to be included in the proceedings. Workshops will start at the prescribed time, but can continue on if desired. Movement between the sessions may be desirable.
- 1:15 BIOCONTROL - Includes a discussion of posters.

 Posters available = R. Hosford and G. Statler, Diseases of Leafy Spurge. G. Statler and R. Hosford, Rusts on Leafy Spurge.

 Discussion topics will include the use of artificial diets and will include chemistry, tissue culture, etc.
- 2:15 MAPPING - Includes a discussion of traditional mapping systems by Terry Volk, Weed Control Officer, Bottineau County, ND.
- 3:15 Coffee
- 3:45 CHEMISTRY AND PHYSIOLOGY - Includes allelopathy, general physiology, chemical analysis of leafy spurge. There will be some overlap with the biocontrol workshop (artificial diets).
- 4:45-5:25 PLENARY SESSION:
- 4:45-5:15 HIGHLIGHTS OF THE WORKSHOPS - given by recorders, 7 min each.
- 5:15-5:25 CONCLUSIONS AND OVERVIEW - C. Schmidt, USDA/ARS, Met. Lab Director, and Location Coordinator, Fargo.

6:00-6:45 - Dinner at Bonanzaville, a frontier town museum.

6:45-9:00 - Self guided tour of Bonanzaville.

Thurs, July 9 - morning session:

7:00 Group breakfast - FOLLOWED BY GPC-14 COMMITTEE MEETING.

9:00 Field Tours

----- (1) Cass County Weed Control Office, conducted by Wayne Colberg.

----- (2) Biocontrol Plots near Lake Ashtabula - about 60 miles west of Fargo. Requires 4-wheel drive vehicles to get into.

12:00 Sack lunch brought from the Doublewood Inn.

1:00 Morning field trips end. Return to Doublewood Inn.

1:30 Additional tours.

----- (3) Leafy spurge plots near Chaffee, ND, about 1/2 hour west of Fargo. End about 4:00 to 4:30.

----- (4) Metabolism and Radiation Research Laboratory.

GPC-14 Executive Committee

Dr. David G. Davis - President

Dr. Dennis Clarke - Vice President

Dr. Robert M. Nowierski - Secretary

Dr. Don E. Anderson - Administrative Advisor

Local Arrangements Committee

Dr. David G. Davis

Dr. Rodney G. Lym

Mr. Wayne Colberg

Dr. Claude H. Schmidt

Minutes of the GPC-14 meeting Doublewood Inn, Fargo, ND July 9, 1987

The meeting was called to order at 8:00 a.m. by Dr. David Davis. Minutes of the 1986 meeting were read by Dennis Clarke. Clarke moved the approval of the minutes as read. Second by Russ Lorenz. Motion carried.

Administrative Director's Report

Dr. Davis called on Dr. Don Anderson for comments and responses relative to letters he had sent Dr. Terry Kinney, ARS, and Bert Hawkins, APHIS. The purpose of the letters was to lobby for more resources for spurge control. In the communications he suggested

spurge control was a long term battle, a priority needing continued emphasis and that the long term solutions will require both biological and chemical control on a broad scale. He urged both Mr. Hawkins and Dr. Kinney to continue to emphasize this in their agency's research programs. Dr. Anderson read the responses received from Lawrence Christie of Dr. Kinney's office and Mr. Hawkins. Mr. Christie's letter stated the control of leafy spurge is one of the more important goals of the ARS weed science research program. He related that in addition to the biological control agents already released, several insects and one pathogen are being studied as possible control agents. He indicated GPC-14 is doing a good job of coordinating the efforts of those involved with leafy spurge control research and that the committee is providing an excellent forum for idea exchange between the research community and state and local control agencies. Mr. Christie also indicated he was open to working with the committee in the future.

Mr. Hawkins notified Dr. Anderson that APHIS agrees that research has identified enough beneficial agents to make implementation of biological control of leafy spurge both a timely and highly successful venture. Hawkins stated APHIS supports the efforts of the leafy spurge research control committee.

Dr. Anderson referenced additional communications. Following a February meeting in Mission, Texas, he wrote APHIS urging additional resources be placed at the Bozeman Lab. This has and is being accomplished. He indicated we may want to further discuss some of the things that are transpiring at the Bozeman facility.

He emphasized that this meeting is the membership meeting of GPC-14 and should include every person interested in research, extension and action programs relating to leafy spurge. He stated that if interested persons were not designated as official representatives on the committee, they should have their administrator contact him asking that they be named as a committee member as membership is open to persons interested in the committee's programs relating to leafy spurge and other noxious weeds.

Dr. Anderson commented on the reorganization of the Great Plains Council committees outlined by Norm Landgren last year. Reorganization has been implemented. GPC-14 is now a task force of the crops and soils standing committee. We are in good standing with the parent committee. At the last annual meeting of the Great Plains Council at Ft. Collins, the council was very supportive of GPC-14. Directors with spurge problems in their state recognize the committee has been very active and serves the purpose of successful communication and coordination of research programs. We have been licensed and encouraged to continue what we've been doing. Dr. Anderson passed a registration sheet around to obtain a record of those present and interested in spurge control.

In closing, Dr. Anderson thanked those responsible for getting the spurge effort initiated and structured. He especially thanked Dr. Peter Fay and Dr. Cal Messersmith.

Business

Newsletter - Dr. Russell Lorenz reported there were some problems with the mailing list. About 50 names were lost during a computer transfer. He feels the system is now functioning adequately.

He indicated that getting material in was still a problem. If people get him the facts he will put the articles together. Article length is a concern. Therefore some articles must be held over until the next issue.

Sufficient funds are available for 1 more year, based on 3 issues. Currently, 900 copies are mailed. New names are being added to the list.

In response to a question of how the newsletter would be funded once the Dow grant was gone, Dr. Lorenz stated he was hopeful we could find a benefactor.

The possibility of charging for the newsletter was advanced. In response to this suggestion, production costs were discussed. Dr. Lorenz stated that, not counting his time, it costs \$100-150/issue, including postage. Dr. Anderson stated administrative costs are small. He feels we'll find a sponsor. No action taken.

Dr. Lorenz agreed to continue as newsletter editor. The need to purge the mailing list every three years was discussed. In 1988 it will be necessary to include a return card with one of the issues.

1987 Meeting - Dr. Davis discussed the format of and planning for this year's meeting. Return of the response cards included in the February newsletter was poor. He related this was disappointing as it made planning difficult. Meals were included in the registration cost because it solved several problems in dealing with the motel.

Forty-nine people registered for the meeting. Many people bought the proceedings and came only for one day's activities. There were about 70 people in the room yesterday. Concerning finances associated with the meeting, Dr. Davis stated he feels we'll come out OK, maybe even a little ahead. He has started a savings account and obtained an IRS number. The account will be transferred to the new chairman.

There was general agreement that inclusion of meals in the registration fee was a good idea, but possibly should be limited to breakfast and/or lunch with evenings left open.

The concept of charging a pre-registration fee that is lower than registration at the meeting was well received.

1988 Meeting - Dennis Clarke reported on the preliminary plans for the 1988 meeting. He announced that the meeting will be held in Rapid City July 12-13.

The tentative schedule included a paper session the morning of July 12, plot tours in Hill City area that afternoon, a chuck wagon supper and for concluding the day's activities by attending the lighting ceremony at Mt. Rushmore. July 13 would be used to finish papers and cover control topics.

Discussion of the 1988 meeting plans yielded the following:

1. Dr. Davis likes the idea of the break in the middle of the session.
2. Dr. Fay feels a need for structured discussion sessions, like those at the Western Weed Society Meeting.
3. Dr. Lym indicated a need to leave time for discussion after each paper is presented. Possibly we should increase each slot to 20 minutes.

4. Dr. Anderson noted that July 12 and 13 are the dates of the NC Research Director's meeting.
5. Dr. Lym reminded everyone of the purpose of GPC-14. It is a meeting of the research people involved with leafy spurge control and not a meeting to educate local weed control officers and county agents. He indicated he felt papers shouldn't be downgraded because the audience has mixed scientific expertise.
6. Dr. Davis feels we may be trying to cram too much into too little time.

Future Meeting Site - Dr. Davis reviewed future meeting sites as being Rapid City in 1988 and Bozeman in 1989. He related there had been a suggestion that the 1990 meeting be held in Nebraska. There also has been a suggestion to meet in Wyoming in 1990.

Dr. Lym suggested that the chairman should be from the host state. He stated that if we keep our normal rotation, we would go to Wyoming, therefore he nominated Tom Whitson to be president in 1990. Dr. Bob Nowierski seconded the nomination.

Dr. Lorenz asked that we call on the party from Nebraska to hear his proposal.

Gene Lehnert discussed his local program, which is being implemented through RC&D and the Range Forage and Livestock Council they have organized. A spurge problem is developing in meadows that are a source of hay shipped out of the area. It is projected that in 5-10 years hay sales will no longer be possible because of spurge. He would like to invite the group to his area for the meeting.

Chairman Davis called for further discussion on the motion to hold the 1990 meeting in Wyoming.

Russ Lorenz stated he would like to help Nebraska with their problem. It offers an opportunity to control leafy spurge at the fringes of the infestation. If holding the meeting in Nebraska would help or if we could help by setting up some sort of special meeting, we should consider the proposal.

Dr. Lym stated he felt we needed to establish some continuity before we move to Nebraska.

Lynn Loughary reminded the group that last year people from Nebraska attended the meeting in Wyoming. There is a demonstrated need. Also she cited Colorado and Kansas interests in spurge control.

Peter Fey stated two other areas we need to consider are Colorado and Idaho. He agrees with Dr. Lym that it would be tenuous to hold a meeting someplace where we didn't have sufficient past history of commitment.

Don Anderson suggested we could support Nebraska's need for assistance with expertise from the group in some way, such as through forming a committee to go to Nebraska and help them get started.

In response to a request to locate the meeting in a more accessible area of Wyoming for ease of travel, it was the consensus of those present that the meeting needs to be held near spurge infested areas. Most people like to look at the plots. The present main target area in Wyoming is near Sundance.

Claude Schmidt suggested that as the 1989 meeting would be in Rapid City an hour to an hour and a half on the program could cover the Nebraska situation.

The question was called. Motion Passed. The 1990 meeting will be in Wyoming; Tom Whitson will be chairman.

Biocontrol - Russ Lorenz asked if the committee needs to help the APHIS effort and commitment relative to biocontrol. Floyd Wendell responded that he feels the effort started here is continuing. There is concern that additional material needs to be brought in for tests. Work on diets also needs to be increased. He would like to ask for a substantial increase in support.

Dr. Anderson expressed a concern that the Albany lab is being phased out. He asked that their efforts be carried out at other locations. He stated that the biocontrol effort needs to be increased as we don't know where the breakthrough will come.

Gary Cunningham, USDA APHIS, informed the group that biocontrol of weeds at Albany is not being totally phased out. Some personnel have been relocated. Two to three people were left there. Some efforts have been redirected. Albany will still be a quarantine site.

Dr. Nowierski stated that he feels the main bottle neck with biocontrol is collection and screening. We need state people to help with this effort.

Dr. Anderson stated we need to support the efforts of and work with other groups, such as Ag Canada.

Motion by Dr. Messersmith to adjourn. Second by Peter Fay. Motion carried. Meeting adjourned at 9:07 a.m.

Dr. Dennis C. Clarke
Acting Secretary