

MINUTES
NCCC-42 SWINE NUTRITION COMMITTEE
Rosen Plaza Hotel, Orlando, Florida
January 4-5, 2007

Chair: Hans H. Stein
Department of Animal Sciences
University of Illinois, Urbana, IL 61801

Vice-Chair: Sung Woo Kim
Department of Animal and Food Sciences
Texas Tech University, Lubbock, TX 79409

Secretary: Layi Adeola
Department of Animal Sciences
Purdue University, West Lafayette, IN 47907

Administrative Advisor: Neal R. Merchen, Head, Dept. of Animal Science,
University of Illinois, Urbana, IL 61801

CSREES Representative: Charlotte Kirk Baer, Program Leader, Animal Systems – Nutrition
USDA-CSREES, 3441 Waterfront Center, 800 Ninth St., S.W.
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NCCC-42 Members Present:

Michael Azain (GA), Tim S. Stahly (IA), Neal R. Merchen (IL, Administrative Advisor), Jim E. Pettigrew (IL), Hans H. Stein (IL), Olayiwola Adeola (IN), Jim L. Nelssen (KS), Gretchen M. Hill (MI), Marcia C. Shannon (MO), Phil S. Miller (NE), Don C. Mahan (OH), Scott D. Cater (OK), Sung Woo Kim (TX), Tom D. Crenshaw (WI).

NCCC-42 Members Absent:

Debra Aaron (KY), Gary L. Cromwell (KY and CSREES), Sam Baidoo (MN), Xingen Lei (NY)

Invited Participants:

Mark Franklin (ADM, Decatur, IN; representing AFIA Nutrition Council Swine Committee)

S-1012 Members Present:

Lee I. Chiba (AL), Charles V. Maxwell (AR), Joel H. Brendemuhl (FL), C. Robert Dove (GA), J. Scott Radcliffe (IN), Nancy Cox (KY, Administrative Advisor), Merlin D. Lindemann (KY), L. Lee Southern (LA), Eric van Heugten (NC), Sung Woo Kim (TX), Allen Harper (VA).

S-1012 Members Absent:

Jose A Cuaron (INIFAP), Debra K. Aaron (KY), Ronald A. Fleming (KY), Miguel Cervantes-Ramirez (Univ. of Baja; MX), Mark Estienne (VA)

Thursday – January 4, 2007

Joint Session

(8:00 a.m.) The joint session of the NCCC-42 and S-1012 committees' annual meeting opened with welcome and introductory remarks by Dr. Hans Stein. On behalf of Drs. Charlie Maxwell and Hans Stein, all attendees were welcomed to the meeting.

Dr. Stein acknowledged the presence of Charlotte Kirk Baer, the permanent USDA-CSREES representative on the committee. Charlotte Baer replaced Dr. Cromwell, who had been an interim USDA-CSREES representative on the committee. Dr. Stein also welcomed Dr. Mark Franklin, the incoming Chair of the Swine Nutrition Subcommittee, as an invited American Feed Industry Association (AFIA) representative and participant. A few changes in the format of the 2007 meeting (compared with 2006 meeting) include: 1.5-day; more time for breakout sessions; and station reports grouped according to themes/topics.

Dr. Stein announced the following: Dr. Cromwell is unable to attend the 2007 meeting because of a trip to New Zealand – the first time Dr. Cromwell has missed the meeting since 1979; Dr. Baidoo is absent from the meeting for health reasons.

Dr. Maxwell introduced the officers of S-1012 committee for 2007: Chair: Dr. Maxwell, Vice-Chair: Dr. Dove, and Secretary: Dr. Lindemann.

Dr. Stein introduced the officers of NCCC-42 committee for 2007: Chair: Dr. Stein, Vice-Chair: Dr. Kim, and Secretary: Dr. Adeola.

Comments from the Administrative Advisor(s)

Dr. Neal Merchen (NCCC-42) welcomed Charlotte Kirk Baer as CSREES representative to the meeting. He brought greetings from Dr. Robert A. Easter (former NCCC-42 Administrative Advisor) and Ms. Gloria Sax (Administrative Secretary for Dr. Merchen). He provided an update on recent activities relevant to the NCCC-42 committee. An important activity this year is the mid-term review NCCC-42 project. Dr. Merchen explained that the NCCC-42 project will be undergoing mid-term review in the current year. The process begins with the submission of a review of the project by the Administrative Advisor, which has been completed. The project will then be reviewed by the NCAC-6 Regional Administrative Committee at their annual meeting in Nashville on January 30. The NCAC-6 Committee will forward a recommendation to the Multi-State Research Committee (MRC) of the North Central Region by February 15. The MRC will conduct a review and forward a recommendation (Continuation, Continuation with Revision, or Termination) to the Regional Office later in the spring. Given the effectiveness, productivity, and high level of participation of the NCCC-42 committee, Dr. Merchen anticipates that the project will receive a strong recommendation for Continuation.

Dr. Merchen reminded the committee that the Minutes of 2007 NCCC-42 Swine Nutrition Committee Meeting should be prepared and submitted within 60 days of the committee meeting (by March 5, 2007). Dr. Merchen remarked that Drs. Mahan and Cromwell have each missed only one meeting since 1972 and 1979, respectively. He also indicated that Dr. Cromwell has posted on the NIMSS website (<http://www.nimss.umd.edu/homepages/home.cfm?trackID=3846>) a list of meeting attendees since 1964. Dr. Merchen circulated that list and requested for any needed corrections. The list is attached.

Dr. Nancy Cox (S-1012) noted that committee longevity is good and both committees have that longevity. But she warned of becoming complacent or stagnant and encouraged consideration of new ideas. Dr. Cox noted that the S-1012 committee project would end in September 2008 and the committee would need to decide how it wished to continue. Experiment stations can now fund attendance at coordinating committee

meetings (which are analogous to the old informational exchange committees) so it is not necessary to have a formally approved project. She then explained some of the differences in the review process between the two types of committees.

Dr. Mahan requested for contact information for members of both NCCC-42 and S-1012 committees in meeting minutes. The information requested is attached. Dr. Stein noted that since his move to IL, there is no representative from SD and there are 2 representatives from IL.

Comments from CSREES Representative

The CSREES representative, Charlotte Kirk Baer, expressed appreciation for the opportunity to represent USDA-CSREES on this committee. Charlotte Kirk Baer asked Dr. Gary Cromwell to stay on in an advisory capacity. She is the Plant and Animal System unit as the national program leader for animal nutrition, the only position devoted to animal nutrition at USDA. She came to CSREES from the National Academy of Sciences where she directed its division on agriculture and natural resources. Baer holds a B.S. degree in animal science from Oklahoma State University and an M.S. degree in nutritional sciences from University of Maryland.

Baer provided an update on current activities in Washington DC and circulated various handouts. In 2007, the CSREES anticipates about \$181 million being available for support of the National Research Initiative Competitive Grants Program and Charlotte Kirk Baer said that a 2008 budget request, based on several themes, is in process. Updates on personnel issues relevant to NCCC-42 and S-1012 include: the appointment of Gale Buchman as the new Under Secretary for Research, Education, and Economics, replacing Joseph Jen on May 12, 2006; Larry Miller continuing as acting USDA/CSREES Associate Administrator; and Mark Robinson as new National Program Leader for Animal Agrosecurity.

Baer provided information on a new initiative/project of the Board on Agriculture Assembly of the National Association of State Universities and Land-Grant Colleges named CREATE-21. The proposal calls for the creation of a National Institute that will be led by an eminent scientist/educator, who will be appointed and confirmed by the US President and Senate, respectively, to a six-year term. A key element of the National Institute, among others, is to provide \$1 billion per year in **new** funding for fundamental research in Food, Agriculture, and Natural Resources. She also discussed her interests in the revision of NRC Swine Publication and her concerns with regards to the decline in Ph.D. Animal Nutrition graduates. Following good and healthy discussions, a need to organize a national workshop on the development of a strategic plan on how to stem the decline was stated.

Station Reports I: Calcium, Phosphorus, Phytase

Drs. Adeola, Azain, Crenshaw, Harper, and Lindemann highlighted current research efforts and other developments of interest from their respective stations. This was followed by a short break at 9:40 a.m.

NCCC-42 Committee Session

The NCCC-42 session convened at 10:00 a.m. with presentation of updates on studies in progress.

Current Studies

Dr. Gretchen Hill gave an update on the Gender/Lysine manuscript (*Nursery-Growing-Finishing Sub-Committee*) submitted to the Journal of Animal Science (JAS). The Associate Editor of JAS (Dr. Lee Chiba)

has forwarded the manuscript to the Division Editor (Dr. Phil Miller) with a recommendation that the paper be accepted.

Dr. Mahan indicated that a draft of the B-Vitamins manuscript (*Nursery-Growing-Finishing Sub-Committee*) is being sent to committee members for comments. Dr. Mahan requested signatures on Copyright Release forms. Dr. Mahan asked that discussions on the Selenium research be moved to the joint session.

Dr. Crenshaw led discussions on the Vitamin-Trace mineral premix study (*Nutrient Metabolism Committee*). He indicated that there was a good response to the poster presented at the ASAS meeting on the study. After further deliberations on publication of the data, Dr. Phil Miller suggested that the data could be published as a Technical Note in JAS. Dr. Crenshaw will send a draft of the manuscript to the committee by August 1, 2007.

Approximately one week before this meeting, Dr. Stein sent a draft of the manuscript (*Nutrient Metabolism Committee*) reporting results of the study on phosphorus digestibility in monocalcium phosphate to the membership. After discussions of the data on ratio of Ca:P retained, limit feeding, and study length, Dr. Stein asked for comments on the manuscript by January 15, 2007.

New Studies

Sow Sub-Committee: Dr. Stahly reported that the funding request submitted to the Iowa Pork Board for evaluating oxidative stress status of both young and multiparous sows was not successful. Dr. Stahly will arrange a sow sub-committee meeting and report back to NCCC-42 at a later date.

Nursery-Growing-Finishing Sub-Committee: Dr. Marcia C. Shannon informed the meeting about an alternative ingredients study, by NCERA-89, that is in the planning stage. The aim of the study is to determine the effect of switching various alternative feed ingredients in the diet on performance and carcass of grow/finish pigs. She requested input on study design and invited NCCC-42 to participate. After a lot of discussion, Dr. Shannon indicated that the final study protocol will be sent to all the members of NCCC-42 and S-1012.

Dr. Mahan presented a new study protocol prepared by Dr. Cromwell. The study is designed to evaluate growth and carcass performance response of pigs to moderate and high concentrations of distillers' dried grains with solubles (DDGS). Lengthy and spirited discussions followed. Further discussions were postponed at 12:00 noon for lunch break.

Joint Session

(1:00 p.m.) The joint session convened at 1:00 p.m.

Station Reports II: Microminerals

Drs. Hill, Kim, Mahan, Radcliffe, Shannon, and Southern presented information on current research and other developments of interest from their respective stations.

NRC Swine Publication

Dr. Stein led discussion on the steps required to initiate a revision of the NRC Swine Publication. An important first stage is raising 70% of the \$350,000 estimated cost before the process is initiated. The second stage is approval to proceed from a 3-membered Advisory Committee. The third stage is the appointment of a committee that will assemble information for the Publication.

Dr. Hill commended and thanked Dr. Stein for his efforts and leadership on this important undertaking. Dr. Miller moved and Dr. Nelssen seconded a motion that Dr. Stein continue leadership role on a New Swine NRC publication. The motion passed. Dr. Stein will write letters to the National Pork Board (\$150,000), American Feed Industry Association (\$75,000), United Soybean Board, Canadian Feed Industry Association, Canadian Pork Council, and Distillers' Grain Council seeking support for the effort to revise the NRC Swine Publication.

There were lengthy discussions on the format of the new publication. Charlotte Kirk Baer emphasized the importance of providing as much advice and guidance as possible before and through out the process. There were also discussions on whether to publish book alone or book plus compact disc. The deliberations were followed by a short break.

(3:30 p.m.) Dr. Stein called the meeting to order following a short break. He thanked Dr. Brendemuhl for his efforts in making arrangements for this meeting and his kindness in providing LCD projector and screen for use in during the meeting. Members of the NCCC-42 and S-1012 committees applauded Dr. Brendemuhl's efforts. The following dates were suggested for 2008 meeting: January 2 to 4, 6 to 8, 7 to 9, or 8 to 10. Dr. Brendemuhl will check with the Rosen Plaza Hotel management and report back tomorrow (Friday) morning. There were suggestions to consider moving the meeting to other locations and or changing meeting dates. After some discussion, it was emphasized that the most important criterion to consider in any location and or date change is popular participation. Dr. Kim will look into the possibility of location and or date change and report back to the group.

Remarks by AFIA Swine Subcommittee Representative, Dr. Mark Franklin

Dr. Franklin thanked the committees for the opportunity to give a few remarks and introduced himself briefly. He remarked that the work that being conducted by the two committees is important to AFIA. Dr. Franklin provided an update on the status of AFIA and talked about a few industry issues. He informed the meeting of the declining membership in AFIA and the changes/restructuring underway in AFIA. He opined the value and importance of NRC Swine Publication and expressed AFIA support for on-going discussions for a revised publication. He suggested a section on nutrient output into the environment in a revised NRC Swine Publication. Dr. Franklin said they desire us to consider them as a resource and he reminded us of their website (www.AFIA.org).

NRC Swine Publication

(4:15 p.m.) Discussions on a new NRC Swine Publication continued. Dr. Stein shared the draft of letters to be sent to the National Pork Board, American Feed Industry Association, United Soybean Board, Canadian Feed Industry Association, Canadian Pork Council, and Distillers' Grain Council and invited comments. Several suggestions were offered including: limiting to 2 pages, using bullets, and attaching names of the members of NCCC-42 and S-1012 committees.

Station Reports III: Weanling Pig Nutrition

Dr. Carter thanked the committee members for prayerful support during his health challenge. Drs. Carter Maxwell, Pettigrew, and van Heughten highlighted current research efforts and other developments of interest from their respective stations.

Dr. Stein announced that those desiring to go to dinner as a group should meet in hotel lobby at 6:00 p.m. The meeting adjourned at 5:00 p.m.

Friday - January 5, 2007

NCCC-42 Committee Session

NCCC-42 Committee Business Meeting

(8:00 a.m.) Dr. Stein opened the NCCC-42 Business Meeting. Dr. Adeola moved and Dr. Miller seconded a motion to approve minutes of the 2006 meeting. The motion passed. Dr. Stein announced that the Chair for the 2008 meeting would be Dr. Kim, and Dr. Adeola would serve as Vice Chair. Dr. Miller nominated Dr. Azain for the open secretary position, Dr. Crenshaw seconded the nomination, and Dr. Azain was unanimously elected.

Dr. Merchen announced that NCCC-42 committee needs to prepare a new Project Proposal before December 2008. Coordination of this effort will be the purview of Dr. Adeola, who would be the Chair at the time.

A group photograph was taken

Discussions on New Studies continued from where we left at noon on Thursday.

New Studies

Nursery-Growing-Finishing Sub-Committee: Four dietary treatment alternatives were proposed for the DDGS study. These include: 1) Leave as is; 2) Flip the Grower and Finisher treatments; 3) Change treatments 2, 3, and 4 to 15% DDGS, or 4) Use 15, 30, 45 % DDGS all the way. After a lengthy discussion, it was agreed to use 15, 30, 45 % DDGS all the way (i.e. the 4th alternative).

The following agreements ensued:

- 1) Each participating station order DDGS from the same IDENTIFIED source as needed
- 2) Send samples of DDGS to Dr. Cromwell
- 3) Add antioxidant to DDGS upon delivery
- 4) End the growth performance aspect of the study when pigs on the control diet (0% DDGS) reach a pen average of 120 kg
- 5) Schedule kill as needed but kill pigs in the same pen at the same time
- 6) Complete the study within 12 months
- 7) Follow this project up with a DDGS withdrawal study

The following in NCCC-42 agreed to participate in the study: GA, NE, IL, IN, KY, OH, OK, TX, WI

Discussion on another new study (DIET ACIDIFICATION) from the *Growing-Finishing Sub-Committee* was led by Dr. Pettigrew. The objective of the study is to determine the effect of a mixture of acids in the diets of weanling pigs on growth performance using diets and weaning ages typical of those used in commercial pork production in the U.S. Dr. Pettigrew will revise the protocol and circulate to the subcommittee by January 31, 2007. The revision will incorporate the following: A) Use 5 diets consisting of 1) Basal, 2) Basal plus 1 unit of acid mixture, 3) Basal plus 2 units of acid mixture, 4) Basal plus 3 units of acid mixture, and 5) Basal plus antibiotic; and B) Maintain 3000 ppm ZnO in all diets.

Nutrient Metabolism Committee: Dr. Stein presented the protocol of a study from the nutrient metabolism committee designed to determine the apparent total tract digestibility of calcium in calcium carbonate,

monocalcium phosphate, and dicalcium phosphate. The following stations indicated willingness to participate: IL, IN, NE, OH, OK, and TX. Dr. Stein will send a revised protocol to the committee members.

In summary, the following 3 new studies are in the planning stage: 1) DDGS (Coordinated by Dr. Cromwell), 2) Diet Acidification (Coordinated by Dr. Pettigrew), and 3) Ca digestibility in calcium carbonate, monocalcium phosphate, and dicalcium phosphate (Coordinated by Dr. Stein).

Joint Session

(10:00 a.m.) The joint session convened at 10:00 a.m.

Dr. Mahan circulated data summary from the Selenium study and led discussion of the data. He requested stations to confirm some of the missing points in the summary.

Station Reports IV: DDGS

Drs. Miller, Nelssen, and Stein presented information on current research and other developments of interest from their respective stations. Dr. Baidoo sent a message through Dr. Stein that the Low-Protein Sow study is underway and should be completed by March 2007 and that the L-carnitine study is scheduled to start shortly. Dr. Stein circulated a handout entitled: Considerations when buying and using DDGS in diets fed to swine. The handout contains valuable information on energy and nutrient concentration, energy and nutrient utilization, inclusion rates for various classes of pigs, and economics of DDGS vs. corn and soybean meal use diets.

Journal of Animal Science Update

Dr. Miller, the Division Editor of the Journal of Animal Science, thanked Dr. Southern for his efforts that assured smooth transition to the new role. Dr. Miller also thanked manuscript reviewers in the group for their contribution to the Journal. He informed the meeting of some changes in the Journal including the reduction from 4 to 3 categories – Accept, Reject, Revision – for manuscripts; and the posting of manuscripts, with digital object identifier (DOI), within 2 weeks of acceptance by the Editor-In-Chief.

Sharing and Discussion of Projects by NCCC-42 and S-1012

Overview of S-1012 Research

The chair of S-1012 committee, Dr. Maxwell, provided an overview. New projects include: DDGS in Sow diets, Complex minerals and Copper in Sow diets, and the Sow Survey project. There is a plan to meet at the ASAS meeting and further discuss some of the projects. Participants were requested for the on-going low-protein diets project. Dr. Maxwell indicated that the L-carnitine project is underway, there are enough sows on the project, and the project will not be extended. Thus, Dr. Baidoo, who has not started the L-carnitine study need not begin.

Dr. Maxwell announced the following as new officers for the S-1012 committee: Chair: Dr. Dove, Vice-Chair: Dr. Lindemann, and Secretary: Dr. Radcliffe.

Overview of NCCC-42 Research

Dr. Stein provided the following overview: One paper on Gender/Lysine coordinated by Dr. Hill has been accepted for publication in JAS; drafts of 2 papers on B-vitamins and P digestibility in monocalcium phosphate prepared by Drs. Mahan and Stein, respectively are in progress; and Dr. Crenshaw will prepare

draft of a technical note on Vitamin-Trace mineral premix study by August 1, 2007. Dr. Stein also announced and requested for participation on the following new projects in the planning stage: 1) DDGS (Coordinated by Dr. Cromwell), 2) Diet Acidification (Coordinated by Dr. Pettigrew), and 3) Ca digestibility in calcium carbonate, monocalcium phosphate, and dicalcium phosphate (Coordinated by Dr. Stein), and 4) An alternative ingredients study from NCERA-89 brought forth by Dr. Marcia C. Shannon.

Station Reports V

Drs. Brendemuhl, Chiba, Dove, and Stahly highlighted current research efforts and other developments of interest from their respective stations.

Announcements

Dr. Adeola reminded members of the Nonruminant Nutrition Symposium at the ASAS meeting in San Antonio, TX in July. Dr. Kim provided the more details on the three symposia in Nonruminant Nutrition. Those are 'Natural Phytobiotics for Health of Young Animals and Poultry: Mechanisms and Application', 'Understanding Protein Synthesis and Degradation and Their Pathway Regulations for Improving Monogastric Production Efficiency and Product Quality', and 'Lessons and Logistics of Application of Digestible Amino Acids in Diet Formulation'.

Dr. Adeola announced International Symposium on Energy and Protein Metabolism taking place in Vichy, France from September 9 to 13, 2007.

Dr. Radcliffe announced the 12th Discover Conference on Food Animal Agriculture holding in Nashville, IN from April 15 to 18, 2007.

There were discussions on meeting format for 2008. Station Report formats for the 2007 meeting was deemed satisfactory and should be maintained at future meetings. Duration of the meeting with respect to 1.5 or 2 days would depend on agenda items and therefore should retain flexibility.

Dr. Miller, on behalf of the committee, thanked Dr. Stein for his leadership during the 2007 meeting.

Dr. Dove moved and Dr. Miller seconded a motion for adjournment of the 2007 meeting. The meeting was adjourned at 11:54 a.m.

Respectfully submitted by
Layi Adeola
2007 Secretary, NCCC-42

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Members and Addresses
January, 2007**

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Yen ARS

Miller CSRS

Pilchard CSRS

Tribble CSRS

Teague CSRS

Johnson CSRS

Cooper CSRS

Wagner CSREES

Tyrrell CSREES

Cromwell CSREES

Bentley AA

Hoefler AA

Sauer AA

Regnier AA

Phander AA

Tumbleson AA

Wagner AA

Layman AA

Easter AA

Merchen AA

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NCR-42 Committee on Swine Nutrition - Annual Meetings and Officers

Year	Host Institution and Place of Meeting	Host	Chairman	Secretary
1964	University of Minnesota - St. Paul	Meade	Hoefler	Tribble
1965	University of Wisconsin - Madison	Grummer	Hoefler	Tribble
1966	Purdue University - West Lafayette, IN	Conrad	Hoefler	Tribble
1967	Iowa State University - Ames	Speer	Seerley	Peo

1968	Kansas State University - Manhattan	Koch	Conrad	Peo
1969	University of Illinois - Urbana	Becker	Conrad	Jensen
1970	Ohio Agricultural Research Development Center - Wooster	Teague	Meade	Jensen
1971	Michigan State University - East Lansing	Miller	Teague	Veuml
1972	ARS - USDA - Beltsville, MD	Frobish	Miller	Veuml
1973	University of Nebraska - Lincoln	Peo	Speer	Allee
1974	University of Missouri - Columbia	Veum	Veum	Allee
1975	University of Wisconsin - Madison	Grummer	Cline	Mahan
1976	South Dakota State University - Brookings	Wahlstrom	Allee	Mahan
1977	University of Kentucky - Lexington	Hays	Cromwell	Easter
1978	North Dakota State University - Fargo	Harrold	Mahan	Easter
1979	Purdue University - West Lafayette, IN	Cline	Harrold	Cornelius
1980	Iowa State University - Ames	Ewan	Easter	Cornelius
1981	Texas Tech University - Lubbock	Tribble	Frobish	Miller
1982	Kansas State University - Manhattan	Nelssen	Cornelius	Miller
1983	University of Minnesota - St. Paul	Pettigrew	Ewan	Crenshaw, T.
1984	University of Illinois - Urbana	Easter	Miller	Crenshaw, T.
1985	Ohio Agricultural Research Development Center - Wooster	Mahan	Calvert	Lewis
1986	Michigan State University - East Lansing	Miller	Crenshaw, T.	Lewis
1987	ARS - USDA - Beltsville, MD	Calvert	Pettigrew	Crenshaw, J.
1988	University of Nebraska - Lincoln	Lewis	Lewis	Crenshaw, J.
1989	University of Missouri - Columbia	Veum	Nelssen	Hamilton
1990	ARS - USDA - MARC - Clay Center, NE	Yen	Crenshaw, J.	Cline
1991	University of Wisconsin - Madison	Crenshaw, T.	Hamilton	Cline
1992	South Dakota State University - Brookings	Hamilton	Veum	Mahan
1993	Orlando, Florida - Joint Meeting with S-145	--	Cline	Mahan
1994	University of Kentucky - Lexington	Cromwell	Lewis	Hill
1995	Orlando, Florida - Joint Meeting with S-145	--	Mahan	Hill
1996	Orlando, Florida - Joint Meeting with S-145	--	Cromwell	Shurson
1997	Orlando, Florida - Joint Meeting with S-145	--	Hill	Shurson
1998	Orlando, Florida - Joint Meeting with S-145	--	Nelssen	Carter
1999	Orlando, Florida - Joint Meeting with S-288	--	Shurson	Carter
2000	Orlando, Florida - Joint Meeting with S-288	--	Hollis	Veum
2001	Orlando, Florida - Joint Meeting with S-288	--	Carter	Veum
2002	Orlando, Florida - Joint Meeting with S-288	--	Nelssen	Cromwell
2003	Orlando, Florida - Joint Meeting with S-288	--	Cline	Cromwell
2004	Orlando, Florida - Joint Meeting with S-1012	--	Veum	Miller
2005	Orlando, Florida - Joint Meeting with S-1012	--	Cromwell	Stein
2006	Orlando, Florida - Joint Meeting with S-1012	--	Miller	Kim

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and Hosts

