

# 2014 NCCC-31 Ecophysiological Aspects of Forage Management Annual Meeting - MINUTES

June 17 – 19, 2014 Michigan State University, Kellogg Biological Station (KBS), Hickory Corners, MI

## Tuesday, June 17, 2004, KBS Conference Center

Meeting started at 1:00 pm.

Attendees: David Barker (OH), Kim Cassida (MI), John Grabber (WI), Tom Griggs (WV), Anowar Islam (WY), Jennifer MacAdam (UT), Renata Nave (TN), Scott Wells (MN), Ben Tracy (VA), Jeff Volenec (IN), Chuck West (TX).

The meeting was called by Tom Griggs followed by members' introduction.

Kim Cassida provided logistics, tours, housekeeping, etc.

Committees were appointed and the members included:

Location of next meeting: C. West, J. Volenec, K. Cassida.

Nominations for Secretary and Chair-Elect: T. Griggs, D. Barker, B. Tracy.

Resolutions: J. MacAdam, J. Grabber.

Proposal renewal: In addition to last year's committee (Mark Sulc, Tom Griggs, and Anowar Islam), Chuck West and Jeff Volenec volunteered to help on the draft.

Reporting started:

1 D. Barker, OH:

Dave reported forage research update at OSU for Mark Sulc. Topics included Alfalfa fertility; Alfalfa additive study (e.g., foliar fertilization, fungicide application); Annual forage (e.g., sorghum grass, annual grains, Sudan grasses); and sulfur application. He summarized that foliar fertilizer had no beneficial effect (based on economics), Gypsum and sulfur application might increase yield, headline fungicide might improve yield. He also discussed four varieties of summer annuals with four harvesting times at two cutting heights. Taller height (cut) had better top growth than shorter cut. Late cut had higher yield, mid taller cut was better. Finally he updated running buffalo clover and Arundo donax (Giant reed) grass.

2 K. Cassida, MI:

Kim provided an update of MSU Forage Research 2014. Some important research topics included High Tannin Birdsfoot Trefoil multi-location project (AL, MI, UT, KY, MO, WV, and WI), the project aims to select high persistence and tannin content in mixture with grass and see effect of plant tannin on soil N cycling; Pasture finished Beef project with the objective to evaluate potential of high sugar

forages for last six weeks of finish on grass-fed beef. They will measure pasture yield and quality, ADG, carcass traits, meat composition and flavor, and economics; UP Potato Soil Health Project aiming to use alfalfa and rye to improve soil health in potato rotation, find the effect of alfalfa and rye on potato disease organisms, they plan to quantify potato disease organisms in each year and assess soil health using Soil Health System; Upper Peninsula Integrated Production System project – An integrated crop livestock system trial including 1 – 4 year rotations of different crops and tillage practices. A good discussion occurred after her presentation.

- 3 J. Grabber, USDA-ARS, WI:  
John discussed about Jumpstarting Alfalfa Production in Alfalfa-Corn Silage rotations – A project to integrate alfalfa into corn to jumpstart fall alfalfa production following corn. To reduce excessive competition, growth regulator such as Prohexadione-calcium (Apogee) can be used; this looks promising and benefits alfalfa. The replicated study (2009-2013), corn was planted first (clear field, roundup ready corn, no-till, 35,000 plants per acre) and alfalfa was interseeded four weeks later. 10-30 oz growth regulator was applied. He summarized that alfalfa yield was doubled in first year but corn yield was reduced by 7-17%; enhancement of establishment and subsequent yield of alfalfa were noticed; growth regulator suppressing interseeding alfalfa did not mitigate reduction in corn yield.
- 4 T. Griggs, WV:  
Tom reported West Virginia University research projects. Research topics included defoliation impacts on root density and cattle dietary N intake and excretion; assessment of pasture root density via NIRS; BFT condensed tannin response to clipping treatments; S grass and their ethanol yields from reclaimed mine sides; Soil microbial (AOA, AOB) abundance and nitrification activity. Tom also discussed equation development for NIRS prediction of pasture sample (CP, NDF, INTDMD48, NDFD48 (SECV, mix pasture nutritive value NIRS equation;  $R^2CV$ )).

After dinner, proposal renewal planning and writing discussion started. Chuck West and Jeff Volenec started discussing and editing the drafted proposal. Members contributed to the discussion included T. Griggs, A. Islam, B. Tracy, S. Wells, J. MacAdam, K. Cassida, and J. Grabber. It was also decided that the discussion will be continued next day.

Meeting ended for the first day.

### **Wednesday, June 18, 2004, KBS Conference Center and field sites**

Meeting started at 8:00 am.

Attendees: David Barker (OH), Kim Cassida (MI), John Grabber (WI), Tom Griggs (WV), Anowar Islam (WY), Jennifer MacAdam (UT), Renata Nave (TN), Scott Wells (MN), Ben Tracy (VA), Jeff Volenec (IN), Chuck West (TX), Jim Kells (MI).

Comments: Admin. Advisor Jim Kells, Chair, Dept. of Plant, Soil, and Microbial Sciences, Michigan State University.

Jim Kells started updating and discussing the renewal processes of the project. He indicated the NCCC-31 is doing OK and the committee is doing an outstanding job what exactly needs to be done. For renewing processes, some important deadlines need to be met. These included:

1. September 15, 2014: Issues and Justification needs to be submitted via NIMSS (submit new proposal – renewal project) and then email to Chris Hamilton. A Cc can be made to Jim Kells.
2. October 15, 2014: Individual member in each state should work with Agricultural Experiment Station and submit objective(s) on which they would work (Appendix E).
3. November 15, Individual's Appendix E is due.
4. Final proposal uploaded by December 1, 2014.

9:05 AM Conference call with Jim Dobrowolski, NIFA representative.

Discussion was made on future projects and funding opportunities, especially about water RFA, areas emphasis, next year RFA (could come out earlier), and strategic plans.

9:45 AM State reports and discussion started.

- 5 A. Islam, WY  
Reported forage research progress in Wyoming. Presented grass-legume mixture studies under center pivot and discussed preliminary results.
- 6 J. MacAdam, UT  
Reported and discussed about Organic Dairy Research – establishment data was taken after planting, next spring 100 plants/m<sup>2</sup> was considered as successful stand establishment, grazing did not start until June 20; BFT – early to mid-June, mostly available and highest production, tannin concentrations changed with maturity, BFT fed animal has higher Omega 3 fatty acid than grass fed. She also discussed and gave an over view of organic BFT seeding rate study.
- 7 R. Nave, TN  
Renata started with her background information – 100% research appointment. She updated her current forage research programs such as herbage accumulation rates and nutritive values of warm-season grasses as influenced by forage management; Sources of N fertilizer, N rates, and their effects on yield and nutritive value of stockpiled tall fescue under grazing; Effect of forage species on the rumen microbial population to estimate methane.

- 10:45 AM Break
- 11:00 AM Field tour and lunch  
 Field tour started, introduction was given by farm manager, Brook Wilke, about Kellogg Farm History and Research and Long Term Ecological Research (LTER); Perennial wheat update was given by Sieg Snapp; Dean Bass talked about Cover Crops at Farming Systems Center and their benefits; at lunch, Kay Gross, Station Director, gave an overview about the KBS. After lunch, Sarah Roley, talked about Great Lakes Bioenergy Research Center (GLBRC) and provided updates on different researches; Howard Straub III, Brook Wilke, and Misty Klotz then talked and demonstrated Pasture Dairy Center and Complementary Forages. Kim also talked about commentary forage studies. The group also visited MSU Dairy Robotic Milking (AUSTRONAUT) Facility. Julie Doll discussed about long term ecological programs and indicated that no-till is the best for C yield.

Meeting ended for the second day.

### **Thursday, June 19, 2004, KBS Conference Center**

Meeting started at 8:00 am.

Attendees: David Barker (OH), Kim Cassida (MI), John Grabber (WI), Tom Griggs (WV), Anowar Islam (WY), Jennifer MacAdam (UT), Renata Nave (TN), Scott Wells (MN), Ben Tracy (VA), Jeff Volenec (IN), Chuck West (TX), Jim Kells (MI)

#### Business

##### Committee reports:

Location of next meeting: Chuck West will be the next host in Lubbock, TX. J. Volenec nominated, A. Islam seconded, committee passed. The meeting will be in June, a Doodle Poll will be done by C. West.

Nominations and elections for Secretary and Chair-Elect: Kim Cassida was nominated by B. Tracy, seconded by J. Volenec, committee passed K. Cassida as Secretary and Chair-Elect.

##### Resolutions:

Be it resolved that

Members of NCCC31 enjoyed a stimulating exchange of information and ideas during their meeting at the Kellogg Biological Station of Michigan State University June 17-19 2014; and that

Dr. Kimberly Cassida was a gracious host who effectively coordinated all local arrangements; and that

The site visits and research discussions with Drs. Sieg Snapp, Julie Doll, Sarah Roley and Kay Gross, as well as Brook Wilke, Dean Boss, Howard Straub, and Misty Klotz were stimulating and informative; and that

Dr. Tom Griggs provided excellent leadership as Committee Chair;

Dr. Anowar Islam provided excellent service as secretary;

Dr. Jim Dobrowolski, who joined us by conference call, clarified policy related to USDA grant programs and the USDA Strategic Plan 2014-2018; and

Dr. Jim Kells, the administrative advisor of NCCC31, provided timely and constructive advice.

The members of NCCC31 are deeply grateful for the creativity and collegiality that have made the 2014 meeting a great success.

Anowar presented briefly NCCC-31 history records; corrections were made and it was suggested to include in the minutes, in NIMSS site and also update every year. Additional discussion included rising plate meter, NIRS equations and quality, mathematical technique, endophyte detection, standardization of unit measures such DM, silage, moisture percentage, N-unit etc.

9:00 AM State reports and discussion

8 B. Tracy, VA

Ben presented orchardgrass persistent research. Orchardgrass survey included 53 fields, 35 producers, 19 counties; varieties included Bench mark, WP 300, Bench mark +, Hallmark, Intensive; average cutting height 7.8 cm, leaf disease 71% of the fields, no correlation between soil pH, P, or K and production rating.

Reporting also included Response of N x K x S fertilization – significant effect was observed of N and K but no effect of S on yield; Cutting height with P and K, significant effects of P and height but no effect of K; Optimizing cutting height to determine cutting effect on bi-culture orchardgrass-alfalfa, intermediate cutting height in combination with N seemed OK; Rotational grazing –extreme to mob grazing – which can build soil organic matter, reduce weeds, increase carrying capacity, and benefits wildlife; Rainfall simulation study – seemed not promising; AES Study multilocations, SVAREC Grazing systems 2014 –continuous, mob, rotational, and spare.

9 J. Volenec, IN

Reported study on Alfalfa P and K Nutrition – the goal was to understand the input of P and K nutrition on yield and persistence and physiology; Miscanthus biomass has not responded to N and P/K (yet); Photoperiod sensitive sorghum can be very productive, Genotype x Environment X Management interaction complicated prediction from field to landscape (maize ~50% response from N, Miscanthus = higher responses) – water flow and composition in Agro-ecosystems can reduce greenhouse gas emissions, soil erosion and nutrient

transport - greater loss of soil following rainfall events from mostly poplar, maize, and sorghum systems; Meta-analysis of Biomass Cropping Systems and impact on environment.

10 C. West, TX

Reported and updated his new role at the Plant and Soil Science Department at Texas Tech University, overall aim – Transition Texas High Plains Ag toward low water use by integrating grazing into cropping systems. Grazing trials are underway; Grass-legume system-OW-B Dahl-alfalfa mix, 8” irrigation; Grass + N at 8” irrigation; Texas Alliance Water Conservation (TAWC) – to demonstrate water use efficiency; Online decision support tool – resource allocation analyzer, strategic crop planning, Irrigation scheduling – in season decision, maintaining weather and water use; Remote sensing by satellite imagery to determine more accurate ET; Digital Image Analysis of Old World B-Dahl to determine LAI/light intensity/biomass yield

11 S. Wells, MN

Scott Wells is a new forage scientist in MN and reported and updated his roles and responsibilities at the university. He initiated many forage research programs in addition to ongoing old programs. Some of his programs included: Nutrient management, Alfalfa variety trial, emergency forages, seeding year – management of alfalfa, alfalfa cutting management, fungicides management, cropping systems research, and alfalfa trial with different K rates.

10:15 AM Break

10:30 AM Proposal renewal writing and final business.  
Business discussion started again. Comments and suggestions will be taken until June 25<sup>th</sup> for inclusion in the proposal renewal draft. It was also decided to invite new forage people to increase the member of the group.

Chair, Tom Griggs, thanked everyone for their time, fruitful discussions, and making this meeting as a successful one.

Meeting officially adjourned at 12:00 noon.

*Notes from T. Griggs for future meetings:*

Circulate attendance list at beginning of each day.

Copy Christina Hamilton (NIMSS/NCRA), Administrative Advisor, and NIFA representative on messages to membership as appropriate.

Include time for Administrative Advisor comments on annual meeting program.

Assign  $\geq 20$  minutes/presentation; 15 min. was not sufficient in 2014.

Schedule a group photograph.

If the designated representative cannot attend the annual meeting, arrange for a replacement to attend.

## NCCC-31

## History of Officers and Meeting Locations

## 1966-2015

<b>Year</b>	<b>Chair</b>	<b>Secretary</b>	<b>Location</b>
1966	D. Smith	A. G. Matches	Wisconsin
1967	L. Smith	K. L. Larson	Minnesota
1968	K. L. Larson	W. F. Wedin	Illinois
1969	W. F. Wedin	A. G. Matches	North Dakota
1970	A. G. Matches	G. C. Marten	Missouri
1971	G. C. Marten	R. W. Van Keuren	Indiana
1972	R. W. Van Keuren	M. B. Tesar	Pennsylvania
1973	M. B. Tesar	C. R. Krueger	Nebraska
1974	C. R. Krueger	L. J. Klebesadel	South Dakota
1975	L. J. Klebesadel	D. A. Holt	Michigan
1976	D. A. Holt	D. W. Graffis	Iowa
1977	D. W. Graffis	L. E. Moser	Ohio
1978	L. E. Moser	C. J. Nelson	Kansas
1979	C. J. Nelson	F. L. Barnett	Illinois
1980	F. L. Barnett	A. L. Barta	Minnesota
1981	A. L. Barta	D. W. Meyer	North Dakota
1982	D. W. Meyer	S. H. Duke	Wisconsin
1983	S. H. Duke	G. Heichel	Missouri
1984	G. Heichel	J. R. George	Nebraska
1985	J. R. George	G. L. Posler	St. Louis, MO
1986	G. L. Posler	A. B. Frank	Indiana
1987	A. B. Frank	J. J. Volenec	St. Louis, MO
1988	J. J. Volenec	D. W. Graffis	Iowa
1989	D. W. Graffis	K. D. Kephart	Kansas
1990	K. D. Kephart	W. J. Moline	South Dakota
1991	W. J. Moline	L. E. Moser	Columbia, Missouri
1992	L. E. Moser	C. J. Nelson	Grand Rapids, MI
1993	C. J. Nelson	J. R. George	Des Moines, IA
1994	J. R. George	J. O. Fritz	Lincoln, NE
1995	J. O. Fritz	K. A. Albrecht	Madison, WI
1996	A. B. Frank	R. M. Sulc	Vancouver, B. C.
1997	R. M. Sulc	K. J. Moore	Columbus, OH
1998	J. J. Volenec	K. D. Kephart	West Lafayette, IN
1999	K. J. Moore	J. J. Volenec	Omaha, NE
2000	K. D. Kephart	G. Cuomo	Ardmore, OK
2001	J. J. Volenec	R. H. Skinner	State College, PA
2002	R. H. Skinner	J. L. Moyer	Manhattan, KS
2003	J. L. Moyer	J. W. MacAdam	Urbana, IL

2004	J. W. MacAdam	R. Leep	Logan, UT
2005	R. Leep	K. A. Albrecht	Madison, WI
2006	K. A. Albrecht	V. N. Owens	Eureka Springs, AR
2007	V. N. Owens	B. Tracy	Coshocton, OH
2008	B. Tracy	P. R. Peterson	Ardmore, OK
2009	P. R. Peterson	C. West	Grand Rapids, MI
2010	C. West	X. Dong	Blacksburg, VA
2011	B. Lamp	X. Dong	West Lafayette, IN
2012	X. Dong	S. Barnhart	Bloomington, MN
2013	T. C. Griggs	J. MacAdam, X. Dong	Lexington, KY
2014	T. C. Griggs	A. Islam	Hickory Corners, MI
2015	A. Islam	K. Cassida	Lubbock, TX



**Agenda – 2014 NCCC31 Ecophysiological Aspects of Forage Management Annual Meeting**

June 17-19, Michigan State Univ. Kellogg Biological Station (KBS), Hickory Corners, MI

Expected participants Barker, Cassida, Grabber, Griggs, Islam, Kells (Admin. Advisor), MacAdam, Nave, Tracy, Volenec, West. Jim Dobrowolski, NIFA representative, will join by conference call

**Tuesday, June 17, KBS Conference Center**

1:00 PM Call to order and introductions: Tom Griggs, Chair; Anowar Islam, Secretary and Chair-Elect  
Welcome: Kim Cassida, host, Dept. of Plant, Soil, and Microbial Sciences, Michigan State Univ.  
Committee appointments:  
Location of next meeting  
Nominations for Secretary and Chair-Elect  
Resolutions  
Proposal renewal  
Discuss approach to planning and writing project proposal renewal

2:30 PM Break

2:45 PM State reports (4 @ 15 min.) and discussion  
1 D. Barker, OH  
2 K. Cassida, MI  
3 J. Grabber, USDA-ARS, WI  
4 T. Griggs, WV

4:00 PM Project proposal renewal planning and writing

5:30 PM Adjourn for dinner at McCrary Dining Hall or on your own

7:30-9:00 PM Proposal renewal planning and writing

**Wednesday, June 18, KBS Conference Center and field sites**

8:00 AM Comments: Admin. Advisor Jim Kells, Chair, Dept. of Plant, Soil, and Microbial Sciences, Michigan State Univ.  
Proposal renewal planning and writing

9:05 AM Conference call with Jim Dobrowolski, NIFA representative. Topics to include status and future directions of Water for Agriculture Challenge Area and Alfalfa and Forage Program

9:45 AM State reports (3 @ 15 min.) and discussion

5 A. Islam, WY

6 J. MacAdam, UT

7 R. Nave, TN

10:45 AM Break

11:00 AM Field tour and lunch:

Intro to Kellogg Farm History and Research (Brook Wilke)

Long Term Ecological Research (LTER) (Sieg Snapp, Julie Doll)

Perennial Wheat and Cover Crops at Farming Systems Center (Sieg Snapp, Brook Wilke, and Dean Baas?)

Lunch (Kay Gross, Station Director)

Great Lakes Bioenergy Research Center (GLBRC) (Sarah Roley)

Pasture Dairy Center and Complementary Forages (Howard Straub III, Brook Wilke, and Misty Klotz)

5:00 PM Return to Conference Center and dorms

5:40 PM Depart for group dinner in Kalamazoo area

### **Thursday, June 19, KBS Conference Center**

8:00 AM Business

Committee reports:

Location of next meeting

Nominations and elections for Secretary and Chair-Elect

Resolutions

Proposal renewal

Other

9:00 AM State reports (4 @ 15 min.) and discussion

8 B. Tracy, VA

9 J. Volenec, IN

10 C. West, TX

11 Santiago Utsumi, animal scientist at KBS grazing dairy (tentative)

10:15 AM Break

10:30 AM Proposal renewal writing and final business

12:00 noon Adjourn