NCCC308 2024 Meeting Minutes – Prepared by Pedro Carvalho

Jessica introduction - 5/21/2024 - 2:08pm

Dr. Deb VanOverbeke - Department Head UNL

**Steph Hansen - Administrator of email list**

Everyone email her for the email.

Research Reports

***2:20 pm - Zach Smith - SDSU***

IBIC earlage as a R source

HMEC

Controlled intake

On-going studies

HMC

Earlage

Early feedlot period roughage management - Beef on dairy

Hair-cortisol

***3:00 pm - Dathan Smerchek and Stephanie Hansen - Iowa State***

Novel corn processing - High shear dry extruded corn

Improved performance - discussion about the cost and opportunities of the technologies

Trace mineral and growth implant technologies

RQUICKI Index value

60 - 100 ppm of Zinc

Steph Hansen - 3:20 pm

Co x RAC

Differences in response to deficient or not cattle

6 vs. 10 ppm Co

***Todd Callaway - UGA 4:00 - 4:30***

Microbiome drives cattle productivity

Interaction between ruminal and fecal

Discussion between microbiome and performance

Collaboration among people in the group and UGA

***Discussion about funding and the future of the industry***

***Methane***

***Water***

***Nitrogen excretion***

5/22/2024

Left the hotel at 8 am

Arrived at research and education center 8:50 - ENREEC

Research reports

***Penn State - Report 9:05***

Tara Felix

Beef on Dairy updates

Breeds that "fail" in growth performance

Wagyu and Limousin

Conclusion = more about the sire than the breed

Igenity Beef - Genomic ranking

Cow farm effect?

Sorgun research

No effect on the new variety on digestibility or analysis

Beef on dairy Heifers

Starting research

Lactation problem?

Discussion on using heifers in research?

Bigger variation among animals

***MSU updates - Jerad Jaborek***

Beef on dairy update

Holstein vs. cross

2 silage levels - 20 vs 40

 Gut fill and animal health

Holstein steers, XB steers, XB heifers, beef steers

***K-State - Blasi - First year***

Beef on dairy

***Colorado State - Pedro Carvalho***

***University of Florida - DiLorenzo***

Protein studies

Cannulated - Smaller animals - low line Angus

Triple Marker Technique

Markers

Better markers for microbes

Different analyses

Glycogen and Nitrogen flow

The contribution of protozoa is much greater than we think

Produces glycogen, and would flow to the small intestine

Microbial protein calculations discussion

More grain

Greater protein and glycogen flow

Methane work

Cashew nutshell extract (5/g head/day)

Decrease CH4 - 31 and 38% in intensity and yield

Interventions on arrival with high-risk cattle

Recently starting

High mortality

Water intake

***Lunch discussion on table energy values***

***NASEM requirements***

***ME performance-based versus lab analysis-base***

5/23/2024

***Steve Loerch Updates - 8:00 am***

The committee is doing well

Reports due in July (August)

May 18 - 21 proposed date for 2025

Discuss the agenda prior to the meeting

***Angelica Van Goor - NIFA update - 8:30***

NIFA primary representative

Document shared with Jessica

New director - Dr. Manjit Misra

New National Program Leader - Dr. Amber Campbell might be the new representative.

The funding success rate dropped due to a decrease in budget.

Pre-doc applications question?

Requires -preliminary exam

Citizenship or permanent residence

Has to be a candidate

Email Angelica with a date update for a potential in-person

Add her to the listserv?

***Kendall Swanson - NDSU - 9:00***

Heat-treated soybean mean vs. DDGS forage-based diets

More lysine with HTSM

Ruminal, duodenal, ileal cannula

Comment on silage RUP - 10-15% RUP of silage instead of 20-25% RUP

Protein digestibility in different forage diets is misleading

DDGS RUP = 65%

No difference in duodenal Lysine flow

VIP - Vasoactive intestinal peptide

VIP is an anti-inflammatory versus acidosis

Cytokines - inflammatory response

One Carbon Metabolites

Coming studies

Leucine in dairy heifers fed milk replacer

Experior and bataine

Energy balance

***Kendall Samuelson - WTAMU***

Liver abscess, beef on dairy, model to create liver abscess

Applied model to induce liver abscess

Bunk space

NDF and starch inclusion and management (feed call)

A hot diet increases liver abscess

Technologies on pH and rumination

Rumenitis and liver abscesses?

Liver abscess in beef on dairy

Current research

Ferapease in high-risk and fat cattle

Receiving beef-on-dairy

Feed additives

Intestine

Feedlot Bootcamp

***Nebraska - Galen Erickson, Pablo Loza, Jessica Sperber***

Innovation in Education - Experiential Learning

Nebraska Feedlot School

4 - 6 month program

Feedlot internship program - BS degree

Byproducts, GHG

Full systems work

In "bad years," CO2 uptake is not offsetting, but in good years, YES

CO2 balance assumption - is the assumption correct?

Wet or dry traditional or fractionated (Solbran) DG

DDGS today is different than past

Wet is still better

No major differences in performance

DDGS CH4 goes up

More fiber - more CH4

Palm Oil Evaluation

The most common oil source

Fed at 4%

Greater GF

Decrease CH4

Pablo Loza - PHREC

Challenges with DDGS supply

Wheat vs corn DG

Wheat byproduct - potentially decrease performance?

Minor difference in performance

Raw or roasted soybean, SBM, and WDGS as a protein source

Loose stool initially in the feeding period

No major results in health

Soybean increases growth performance

Roasted interesting increase - not a major cost

WDGS - no major difference versus control

Roasted soybeans seem to be a valid alternative to WDGS

Upcoming research

Soybean feeding

Renergy/monensin

Wheat processing

Dry beans