

Minutes of SD Oilseeds Council Meeting

March 1 & 2, 2023

SDSU Regional Extension Center

412 West Missouri Ave. Pierre, South Dakota

Wednesday March 1, 2023

11:30 **Call to order** - Quorum Declared by Chairman Todd

Chuck Todd, Chairman	Present both days	Lance Hourigan	Present both days
Kei Oberlander	Present both days	Shannon DuPoy	Absent Wed. present Thursday
Ryan Olson	Present both days		

Tom Young, Executive Director Austin Young, Admin Assistant

Visitors: Warren Rusche, SDSU and Ali Nafchi, SDSU

Conflict of interest announcements – None made

- **Approval of the Amended Agenda as posted - Motion by Olson / Oberlander – Passed**
- **Reading of the Minutes of January 31, 2023. Motion by Olson / Oberlander - Passed**

11:50 am **Public Testimony** - time for public comment. No Comments were offered.

Break for lunch.

1:00 pm **Review of Research Projects for FY24**

Dr. Maneesha S. Mohan, SDSU

Value added food ingredient from sunflower and canola oilseed cakes Page 30

Removing other byproducts from oilseed cakes for a value added food ingredients.

Dr. Adam Varenhorst, SDSU Dectes stem borer management in SD Page 4

With the recommendation of planting sunflowers earlier what will happen to other insect management such as the Dectes Stem Borer. The miss labeling of insects such as Ataxia Hubbardi, stem borer larvae, does not cause lodging. So, with a field survey and planting date study looking for these stem insects and their damage caused by them.

Dr. Srinivas Janaswamy, SDSU

Synthetic nodules for sustainable sunflower nitrogen nutrition. **Page 41** Application of nitrogen nutrients via a synthetic nodule at planting time.

Dr. Srinivas Janaswamy, SDSU

Novel and commercial use of sunflower biomass: Creating new income streams for farmers.
Page 46 With the use of hulls and stocks of sunflowers to create a cellulose film with the potential to replace plastics.

Dr. Zhengrong “Jimmy” Gu ‘s Team – Mathew Cole

Purification of Sunflower Protein for Sustainable Ag-based Economies. **Page 51**

GSL – absorption of glucosinolates onto a medium to be used as a biofumigant derived from Canola oil. Using the biofumigant in the soil to prevent cyst nematode which did not work in current formulation. However, there was an increase of root mass of 22.6%. Sunflower tests were frozen in the green house and are being re-grown.

Removal of Phenolics and fiber from sunflower meal to allow great adaptation of the meal for feed. Using the Extraction Product to create a stimulant for new sunflower planting.

Dr. Zhengrong “Jimmy” Gu ‘s Team – Jimmy Gu

Highly Sensitive CRISPR/Cas12a-Based Rapid Detection of Sclerotinia Sclerotium Sunflower.

Page 56 Using the CRISPR sensor to sample and report via cell phone the detection of a white mold in soil. The sensor could be calibrated for different funguses.

Dr. Zhengrong “Jimmy” Gu ‘s Team - Jordan

Using sunflower oil as a precursor for the development of a biodegradable and edible polymer with nanocrystalline cellulose to increase mechanical properties. **Page 61**

Thursday-

Dr. Febina Mathew, NDSU Diagnostic tools to detect fungicide resistance in Phomopsis.

Handout. - QoI fungicides are effective against fungi causing Phomopsis. It won't be long and there will be resistant fungal strains. We need to monitor the resistance development. Part of this is currently funded from NSA however it is under-funded to develop the primers of the detection for all locations in the Dakotas. Previously primers we set for Minnesota but need different primers to read the Dakota type of Phomopsis. Additionally, will set up a new monitoring system to work in the Dakotas.

Dr. Madalyn Shires, SDSU Addressing current and emerging disease issues on South Dakota oilseed crops through research and extension approaches. Page 15

White mold, *Sclerotinia sclerotium* in vevvo tests. Set up a grower survey; Work towards a photo disease app for phones; and look at white mold in sunflowers.

Dr. Thandi Nieya, SDSU Impacts of fertilizer placement on Sunflowers. Page 25

NDVI imaging and SPAD green reading of variable rate broadcast vs. liquid band at different N fertilizer rates. Data collected on the different applications ... yields, oil content, chlorophyll ... year 2 of a possible 3-year study.

Bishnu Karki, SDSU Utilization of Sunflower Seed Processing Waste for the Co-production of Edible Mushrooms and Dietary Feed Ingredient, and Simultaneous Biowaste Reduction. Page 36 SMS is an organic waste from the production of mushroom and is composted or thrown out. Growing mushrooms in processed sunflower hulls reducing waste of both commodities. Future looking at fermentation of the sunflower material with the mushroom waste to make it better cattle feed.

Zach Smith, SDSU & Warren Rusche, SDSU Cattle feeding in the renewable fuel era: How much canola meal can we feed to feedlot cattle? Page 9 Canola meal values was done on varieties no longer grown. So, what are the efficiency of replacing DDGS with a containing canola meal at varying rates?

Warren Rusche, SDSU & Zach Smith, SDSU Sunflower Meal and Renewable Diesel: New Era for Sunflower Growers and Cattle Producers page 20 Sunflower meal high in methionine limiting amino acid for cattle growth and research on the meal value is different than the data from 1997 compared against urea and to day needs to be against DDGS. What is the value of the by-product meal. So, feeding cattle with a sunflower meal with hulls to replace DDGS at varied rate to see what the feed value truly is.

Ali Nafchi, Assistant Professor, Precision Ag Ext., SDSU Development of an Inexpensive Laser Scarecrow. Since the first design the Scarecrow is much simpler and lest costly. Starting with 1,000-watt laser. Green light detracts the birds. Added a red laser to keep them from becoming too accustomed the green. Year two will increase the in the field testing.

Review & Approval of Research Funding

Review of each project was made and while each of the projects were worthy of funding it was decided to limit funding of these projects to approximately \$100,000.

-Motion to grant funds to four projects listed at a reduced amount of \$10,000 each from the requested amount of funding due to the cost of student fees in the requests and a limited amount of funds available from the Oilseeds Council. The Researcher, PI, will have the option to:

- a) Except the reduced funding and complete the research as presented.***
- b) Re-submit the project reflecting the work to be done at the funded rate.***
- c) Not except the funding for the project as presented.***

Projects offered funding were: (Page number is from the SDSU/ Oilseeds Book of Requests)

Dr. Adam Varenhorst, SDSU Dectes stem borer management in SD Page 4

Requested \$37,762 Funding offered at \$27,762

Dr. Thandi Nieya, SDSU Impacts of fertilizer placement on Sunflowers. Page 25

Requested \$30,715 Funding offered at \$20,715

Bishnu Karki, SDSU Utilization of Sunflower Seed Processing Waste for the Co-production of Edible Mushrooms and Dietary Feed Ingredient, and Simultaneous Biowaste Reduction. Page 36

Requested \$36,417 Funding offered at \$26,417

Ali Nafchi, SDSU Assistant Professor, Precision Ag Ext., Handout not in book.

Development of an Inexpensive Laser Scarecrow. Year 2 of research.

Requested \$35,109 Funding offered at \$25,109

Total of these SDSU Research Grants for FY2024 are offered at \$100,003.

1st Hourigan / 2nd Oberlander --Motion Passed

National Sunflower (NSA) Joint Research

The Council reviewed the opportunity to join with the NSA for FY24 in research of Seed Weevils.

Motion to approve \$30,000 to be used in the fight against seed weevils in cooperation with the

National Sunflower Association. 1st Hourigan / 2nd Oberlander --Motion Passed

Budget fy24 Approval

The Council created a budget for FY24 with \$354,100 income, \$408,503 Expenses and the use of \$54,403 from saved funds for a net income of \$0.00.

-Motion to approve the FY24 Budget. 1st Oberlander / 2nd Olson Motion Passed

Election of Officers

Motion to have Officers remain the same through FY24. President Todd, Vice President Oberlander, Hourigan Sec.- Treasurer. 1st Hourigan / 2nd Olson Motion Passed

Next meeting tentatively scheduled for August or September, 2023.

4:50 PM Adjourn – Motion by Hourigan / Olson to Adjourn. – passed

Submitted by Tom Young, Executive Director