

THE NORTH DAKOTA CROP PROTECTION PRODUCT HARMONIZATION AND REGISTRATION BOARD

MINUTES OF APRIL 13, 2021

The North Dakota Crop Protection Product Harmonization and Registration Board met on April 13, 2021.

Chairman Jeff Topp called the meeting to order at 1:05 p.m. Board members present were: Commissioner Doug Goehring, Senator Terry Wanzek, Representative Mike Brandenburg, Troy Bassingthwaite, Dr. Greg Lardy, and Eric Lahlum.

Non-board members present included: Jerry Sauter (NDDA), Sara Timmer (NDDA), Dr. Michael Wunsch (NDSU), Dr. Kirk Howatt (NDSU), Joseph Mettler (NDSU), Dr. Brian Jenks (NDSU), Dr. Harlene Hatterman-Valenti (NDSU), and Dr. Venkataramana Chapara (NDSU).

3. Approval of Minutes. Brandenburg moved to approve the minutes from the December 2, 2020 meeting. The motion was seconded by Wanzek. Motion carried.

4. Minor Use Pesticide Fund Grant Budget Report. Sauter provided a report on the minor use fund budget. There was a carryover balance of \$78,579.67 from the 2017-2019 biennium. The legislature appropriated \$325,000.00 for the 2019-2021 biennium for a total of \$403,579.67. Payments made in the 2019-2021 biennium were \$168,621.00. Outstanding expenditures are \$102,491.50 for total obligations of \$271,112.50. Net funds available are \$132,467.17.

5. Pesticide Harmonization Grant Budget Report. Sauter provided a report on the pesticide harmonization grant fund. Legislative appropriation for the 2019-2021 biennium is \$75,000. No cash carryover. Payments for expenses so far total \$44,173.99, leaving a net fund balance of \$30,826.01.

Sauter suggested paying some of the projects using the balance left in the pesticide harmonization grant fund, as it cannot be rolled over.

Wanzek moved to receive and file both reports. The motion was seconded by Bassingthwaite. Motion carried.

6. Reports on Previously Funded Minor Use Fund Projects.

- I. Optimizing the deployment of tank mixes with chlorothalonil for management of Ascochyta blight in chickpeas. Dr. Michael Wunsch, NDSU.

Conclusion:

- Tank-mixing Bravo WeatherStik with Proline has reduced Ascochyta blight and increased chickpea yield under low, moderate and high disease pressure.
- When Ascochyta disease pressure is low, the tank-mixing of Priaxor with Bravo WeatherStik has little to no impact on disease control. The tank-mix has conferred sharply improved disease control and chickpea yield when Ascochyta pressure is high.
- With regard to fungicide spray volume, results varied greatly between 2019 and 2020. There was a strong response to spray volume in 2019 and none in 2020. Further testing is required.
- In field trials conducted with TeeJet nozzles, the performance of Proline tank-mixed with Bravo WeatherStik was optimized with fine droplets irrespective of canopy closure.
- With Wilger nozzles, performance was optimized with fine droplets when the canopy was open when significant Ascochyta pressure first developed and with coarse droplets when the canopy was at or near closure when significant Ascochyta pressure first developed.

II. Optimizing the deployment of fungicide seed treatments relative to crop rotation interval and planting date: Dr. Michael Wunsch, NDSU**Conclusion:**

- Crop rotation, combined with early planting, was an effective tool for root rot management in field peas in Carrington and in Hettinger. It is important to emphasize that crop rotation was used in conjunction with early planting.
- Studies suggest that early planting is a useful tool for managing root rot in field peas.

III. Optimizing fungicide spray droplet size and spray volume for improved white mold management in dry beans: Dr. Michael Wunsch, NDSU**Conclusion:**

- No response to spray volume. Follow-up research needed to confirm.
- For pinto, black and navy beans, the spray droplet size that optimized white mold management with TeeJet nozzles was contingent on canopy closure. When the canopy was open, fine droplets conferred the highest yield gains. When the canopy was at or near closure at the second fungicide application, medium or coarse droplets conferred the highest yield gains.
- Response to droplet size with the Wilger nozzles was inconclusive for pinto beans. In black and navy beans, the optimum droplet size was shifted upward for Wilger nozzles as compared to TeeJet nozzles.

- In kidney beans, the spray droplet size that optimized white mold management differed for light-red vs. dark-red. Coarse droplets conferred the highest yields in light-red kidney beans, while medium to coarse droplets conferred the highest yields in dark-red kidney beans.
- The impact of droplet size on kidney beans was similar across studies irrespective of canopy closure.
- Studies suggest the droplet size needs to be calibrated relative to canopy characteristics

IV. Herbicide use in industrial hemp: Dr. Kirk Howatt, NDSU

Conclusion:

- Imazethaypr and acetochlor were not practical candidates for use in hemp given the amount of visible injury observed, though they demonstrated desirable yield response.
- Quinclorac negatively influenced yield compared to the hand-weeded, but is comparable to the untreated, weedy standard and, therefore, could warrant further study.
- The best preemergence herbicide options moving forward for registration are Pendimethalin, Trifluralin Salfufenacil and Proxasulfone.

V. Tame oat tolerance to soil-applied herbicides: Dr. Brian Jenks, NDSU

Conclusion:

- Results varied by year and location.
- Warrant, Dual II Magnum and Prowl applied preemergence generally did not cause unacceptable injury or reduce oat yield in any site-year.
- Significantly less injury when post applied at 1-leaf oat vs 4-leaf oat.
- Dry conditions hindered herbicide activation and oat growth. Study to be repeated in 2021.

VI. Crop tolerance to fall applied herbicides: Dr. Brian Jenks, NDSU

Conclusion:

- No injury observed to sunflower, dry pea and chickpea from fall applied 2, 4-D or dicamba in either Hettinger or Minot.
- There was slight injury to lentil.
- Lentil was the most sensitive to carryover from fall application, especially to dicamba.
- Data will be submitted to registrants for consideration to change the label to allow a fall application prior to planting sunflower, dry pea or chickpea.

VII. Flax tolerance to soil-applied and post-emergence herbicides: Dr. Brian Jenks, NDSU

Conclusion:

- Results from soil-applied herbicides:
 - Drought conditions impacted crop emergence, crop growth and herbicide activation of soil-applied herbicides
 - Minot: very little injury observed from soil-applied herbicides in 2017, 2019 and 2020. More injury observed in 2018 due to rains in June. Fierce & Valor injury not acceptable.
 - Hettinger: very little injury observed from soil-applied herbicides in 2017, 2018 and 2020. More injury observed in 2019 due to rains in June. Fierce & Valor injury not acceptable.
 - Carrington: slight to moderate injury observed from soil-applied herbicides in 2017 and 2019. No injury observed in 2020. More injury observed from Outlook in 2019, which is not acceptable.
- Results from post-applied herbicides:
 - Minot: Armezon, Basagran and Basagran+Raptor caused similar or less flax injury compared to Bison. Raptor alone caused severe injury. None of the treatments differed in yield.
 - In Hettinger: all treatments caused slight flax injury, but were similar to Bison. Yields did not differ from Bison.
 - In Carrington: flax injury was similar to Minot and Hettinger. There was more injury from Raptor compared to other treatments, however the injury subsided over time. Yields did not differ from Bison.

VIII. Weed control in onion: using an integrated system for early season control: Dr. Harlene Hatterman-Valenti, NDSU

Conclusion:

- Oakes Research Center:
 - Applying the half rate of Satellite HydroCap 2 DAP or Nortron + RoundUp 10 DAP provided poor common lambsquarters control, which did not improve with the maintenance of herbicide applications.
 - Applying Prowl H2O 21 DAP along or after RoundUp 10 also provided poor common lambsquarters control, but the maintenance herbicide applications increase this control to acceptable.
 - The greatest total yield for 'Sedona' occurred when Satellite HydroCap was applied 2 DAP.
 - The greatest total yield for 'Mondella' occurred when Prowl H2O was applied alone 21 DAP.

- Grower's Field near Oakes, ND:
 - All treatments provide excellent early-season weed control.
 - The greatest total yield for 'Hamilton' occurred when Satellite HydroCap was applied at 0.5x along 10 DAP.

Motion was made by Commissioner Goehring to approve and file the final reports and make the final payments. The motion was seconded by Wanzek. Motion carried.

7. Consideration of New Minor Use Funds Requests.

- I. Optimizing fungicide spray droplet size for improved white mold management in dry beans: Dr. Michael Wunsch, NDSU

This project seeks to optimize fungicide spray droplet size relative to canopy closure in light-red kidney, dark-reg kidney, black and navy beans for improved white mold disease control and dry bean yield under white mold disease pressure. This request is for continuation of a previously funded project.

Funds Requested: \$20,000

Matching Funds: \$20,000 from Northarvest

- II. Delayed pre-emergence herbicide use in industrial hemp: Dr. Kirk Howatt, NDSU

This project is to investigate how industrial hemp responds to various pre-emergence herbicides when applied after crop emergence to extend weed control into hemp canopy closure.

Funds Requested: \$15,000

Matching Funds: None

Dr. Howatt mentioned that, if additional funding is available, they could do residue analysis that would demonstrate to registrants that residue of herbicides in the seed will not be an issue.

- III. Tame oat tolerance to soil-applied herbicides: Dr. Brian Jenks, NDSU

This project will evaluate oat tolerance to several soil-applied herbicides applied either pre-emergence or early post-emergence. This request is for a repeat of a previously funded project that was hindered by dry conditions.

Funds Requested: \$10,000

Matching Funds: None

Discussion was held regarding whether better data could be obtained with an irrigated plot. Dr. Wunsch was asked if this could be done in Carrington and he agreed that it could. Additional funding will be needed for this third location. Dr. Wunsch and Dr. Jenks will work together to determine how much additional funding will be needed. Dr. Jenks will add the additional location and funding to his final report.

IV. Flax tolerance to soil-applied and post-emergence herbicides: Dr. Brian Jenks, NDSU

This project will evaluate flax tolerance to pre-emergence and post-emergence herbicides. The objective is to find herbicides that are safe on flax but will control redroot pigweed and/or annual grasses. This request is for continuation of a previously funded project.

Funds Requested: \$15,000

Matching Funds: \$7,500 from AmeriFlax

V. Dual magnum and reflex for weed control in pumpkin and winter squash: Dr. Harlene Hatterman-Valenti, NDSU

This project will evaluate the performance of herbicides Dual Magnum and Reflex with regard to weed control in pumpkin and winter squash. The objective is to provide trial data so that it may be possible for the use to be updated on the national label for Dual Magnum to include pumpkin and winter squash and to allow for 24(c) registration of Reflex in ND.

Funds Requested: \$9,528

Matching Funds: None

VI. Management of bacterial leaf blight of field peas using chemical compounds: Dr. Venkataramana Chapara, NDSU

This project will explore the options of using various compounds in North Dakota to manage bacterial blight. The objective is to determine the efficacy of chemical compounds to manage bacterial leaf blight of field peas.

Funds Requested: \$3,400

Matching Funds: \$3,400 from NPGA

Discussion was held regarding whether minor use projects could be funded directly out of the harmonization grant or if funds would need to be transferred. It was decided that funding directly would be cleaner.

Senator Wanzek moved to fully fund the following projects, with the first half being funded out of the harmonization grant and the second half being funded from the minor use fund: optimizing fungicide spray droplet size for improved white mold management in dry beans, flax tolerance to soil-applied and post-emergence herbicides, dual magnum and reflex for weed control in pumpkin and winter squash & management of bacterial leaf blight of field peas using chemical compounds. Seconded by Bassingthwaite. Motion carried after a roll call vote.

Commissioner Goehring moved to fully fund the delayed pre-emergence herbicide use in industrial hemp and tame oat tolerance to soil-applied herbicides projects out of the minor use fund, leaving some flexibility of up to an additional \$5,000 for irrigation costs for Dr. Jenks' tame oat tolerance to soil-applied herbicides project. Seconded by Senator Wanzek. Motion carried. Dr. Jenks will submit a modified proposal and budget.

Discussion was held regarding whether to allow additional funds for Dr. Howatt to do some research on herbicide residue.

Commissioner Goering moved to fund up to an additional \$5,000 for Dr. Howatt's research on residue. Seconded by Bassingthwaite. Motion carried.

8. Meeting adjourned 3:37 p.m.