

2020 Summer Advisory Board Meeting

Weed Science Research Update

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Current Research Projects for 2020:

The 2020 field season started with a full soil moisture profile and optimism for a successful season of weed control research. While crops stands were excellent for the most part, the lack of rain from April through nearly the end of June resulted in losses of research opportunities for evaluation of preemergence herbicides; for weed control as well as for an understanding of crop tolerance to these herbicides. Recent rainfalls will give opportunities to evaluate how well preemergence herbicides applied in May will have on controlling late flushed of weeds that will undoubtedly emerge. Many weed seeds have been waiting in drought induced dormancy, waiting for additional rainfall to stimulate germination and emergence. We hope to be able to evaluate whether these herbicides, applied soon after crop planting, will be able to control these late weed flushes. Preemergence herbicide trials are being conducted in field peas, lentils, chickpeas, spring wheat, oats, flax, sunflower, safflower, buckwheat, and tame mustard.

We are also continuing to evaluate fall application of preemergence herbicides both for weed control and crop tolerance in peas and lentils. Spring application of preemergence herbicides relies on rainfall soon after planting in order to activate these herbicides. In southwestern North Dakota, spring rains are often inconsistent and not in sufficient quantity to fully activate these soil active herbicides. When herbicides are applied in late-fall, herbicides can be activated through fall rains and snow and with cold weather, they can remain active into the spring. These fall applications may reduce inconsistent weed control often found with spring application of these same herbicides. The biggest limitation will be to how long these herbicides will remain active in the soil. The question is, will these fall applied herbicides provide adequate weed control for long enough to allow for crop canopy development. We are also evaluating tolerance of sunflower, field peas, lentils, and chickpea to a late-fall application of dicamba and 2,4-D.

Preemergence herbicides do play an important role in many crops, especially pulse crops which have few herbicides available for postemergence weed control. However, when rainfall is lacking, it is important to have postemergence options for weed control. We are evaluating postemergence applied herbicides for weed control and crop tolerance in wheat, canola, oats, flax, chickpea, buckwheat, and tame mustard. We are also evaluating glufosinate formulations and adjuvants combinations for control of kochia.

Presentations and Outreach:

- Wild world on weeds workshop at Fargo, ND. January 2020
- Western Dakota Crops Day at Hettinger, ND. December 2019
- Western Society of Weed Science, March 2020
- 2020 North Dakota Weed Control Guide contributor