

WASHINGTON TURFGRASS SEED COMMISSION
PROGRESS REPORT

Project No.: 2196

Title: Integrating New Tools for Grass Weed Control in Kentucky Bluegrass and Perennial Ryegrass.

Personnel: Ian Burke, Professor

Accomplishments:

- Both Alion (indaziflam) and Zidua (pyroxasulfone) are effective herbicides for managing the most common problematic grass weeds in perennial ryegrass, but not safe for Kentucky bluegrass even with carbon seeding. Alion is now labeled for turfgrass for seed use in Oregon and Washington, but only west of the Cascades.
- Axial Bold (fenoxaprop + pinoxaden) and Outrider (sulfosulfuron) were evaluated for crop safety in Kentucky bluegrass – Outrider is safe, Axial Bold will require careful timing. Both will improve control of certain annual grass weeds.

Results:

In the fall of 2019 and in 2020, multiple field trials were conducted to study Zidua (pyroxasulfone), Alion (indaziflam), Axial Bold (fenoxaprop plus pinoxaden), and Outrider (sulfosulfuron) for grass weed management and crop safety in turfgrass for seed. Our results indicate:

- 1) Preemergence applications of Alion or Zidua in combination with Calisto provide complete control of downy brome, rattail fescue, alkali grass, and annual bluegrass in the establishment year, but requires the use of activated carbon above the seed row for selectivity.
- 2) Carbon seeding is an effective strategy to achieve selectivity with pyroxasulfone and indaziflam for perennial ryegrass, but not for Kentucky bluegrass.
- 3) Axial Bold could be used in Kentucky bluegrass, but timing of application may be limited to late summer and fall due to crop safety. Field work focusing on Axial Bold was conducted in both newly seeded and established stands, causing significant injury in both. Newly seed Kentucky bluegrass that was 2 to 5 tiller appeared to be more tolerant and able to recover, indicating that fall applications for control of emerged winter annual grass weeds may be possible.
- 4) No newly seeded Kentucky bluegrass response was observed when treated with Outrider, an important discovery for the control of winter annual grass weeds, particularly ventenata. The use of Outrider in an overall system, and in newly seeded and established stands in fall applications is a critical next step for developing Outrider into a weed management tool.

Publications:

For detailed reports of our work for the Turfgrass for Seed Commission, please visit the Small Grains website: Lyon et al. 2020. Annual Weed Control Report.

<http://smallgrains.wsu.edu/weed-resources/weed-publications/weed-control-reports/>