

Determining effective application volumes for Rejuvra using aerial applications to control downy brome

Aero Applicators partnered with Bayer Environmental Sciences to help determine the most accurate spray volume when applying Rejuvra from fixed-wing aircraft for downy brome/cheatgrass control. Using our AT-602, Rejuvra alone and Rejuvra + Plateau were applied at two different gallons per acre (GPA), 2.5 GPA and 5 GPA. Rejuvra is a pre-emergence herbicide used to control downy brome as it begins to germinate in the fall. Several studies have shown that it provides +3 years of control in a variety of different environments. Applications are typically made between May-August but can also be applied in the fall with the addition of a post-emergent herbicide, such as Plateau. For more information about Rejuvra, visit [Bayer Environmental Sciences](#) website.

Treatments: Rejuvra 5 oz/acre @ 2.5 GPA; Rejuvra 5 oz/acre @ 5 GPA; Rejuvra 5 oz/acre + Plateau 5 oz/acre @ 2.5 GPA; Rejuvra 5 oz/acre + Plateau 5 oz/acre @ 5 GPA

Data was collected in July 2021 which included percent cover of ground surface covered by litter, bare ground, or live vegetation (figure 1) in addition to percent cover of individual species (figure 2).

Conclusions:

- **Two years after application**, Rejuvra alone or in combination with Plateau **provided effective downy brome control** (< 4% cover in treated plots).
- **Regardless of gallons per acre rate** (2.5 or 5 GPA), downy brome control was consistent.
- In figure 1, the check had more vegetation cover than the treated plots; however, most of that was downy brome (32%) while the perennial grasses made up only 18% cover. **The treated plots had little to no downy brome and the perennial grass made up 24-30% cover** (figure 2).
- **Rejuvra provides the opportunity to increase perennial grass production**, especially in years with average moisture, as it provides long-term downy brome control. This allows for more resources, such as soil moisture, to be available for perennial grasses. This is especially important in drier years where moisture is limited.

Experiment Info:	
Application date	9/5/2019
Location	Southwest of Sterling; CR 25 and CR 16
Plot size	70 ft x 390 ft = 0.63 acre
Replications	3
Evaluation date	7/15/2021

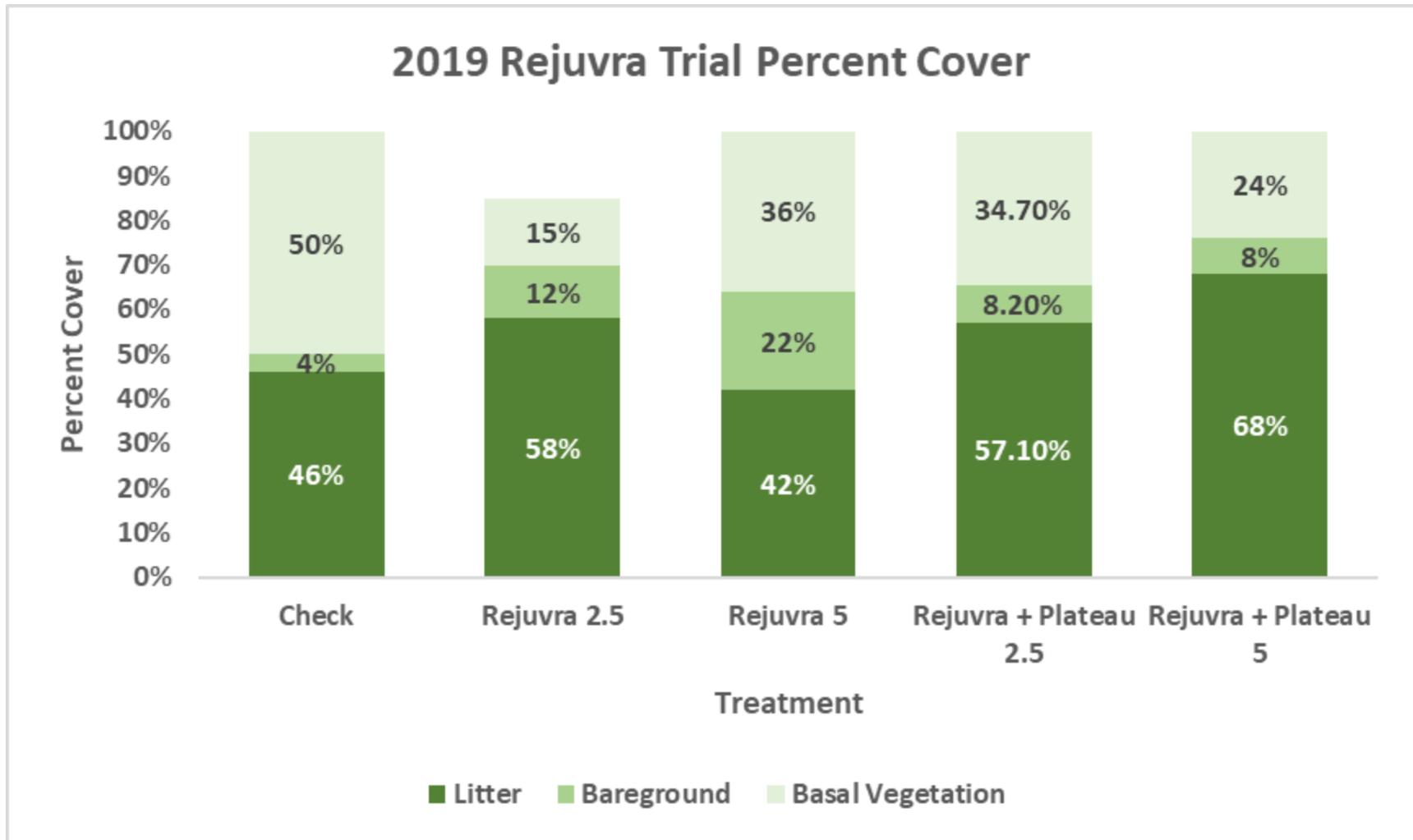


Figure 1. Percent cover for litter, bare ground, and vegetation within each treatment. Vegetation cover contributed 15-50% of ground cover, litter contributed 42-68% cover, and bare ground contributed 4-22% cover.

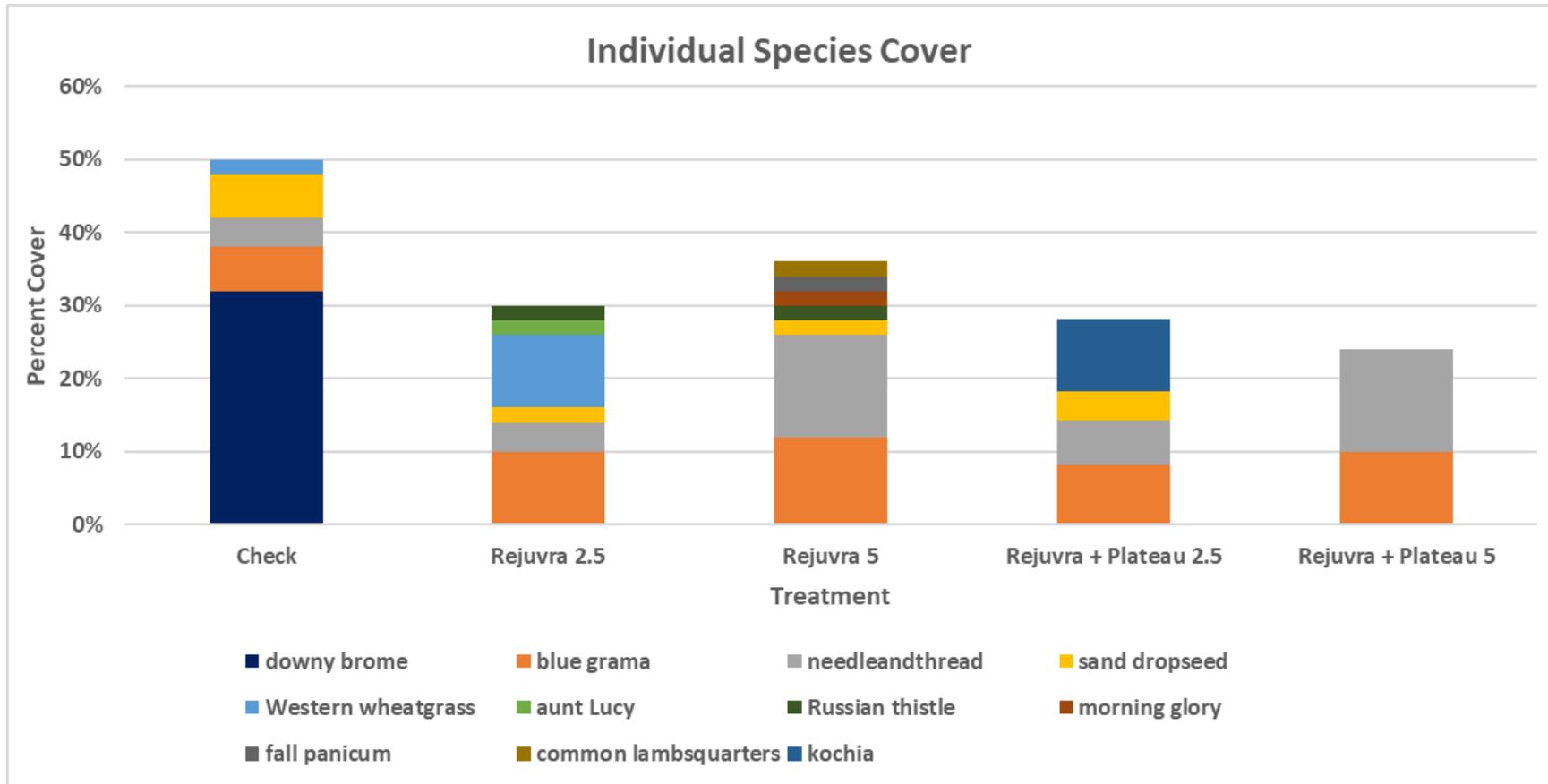


Figure 2. Percent cover of individual species within each treatment. Individual cover for each species in a treatment represents the total basal vegetation evaluated (reference Figure 1). There were other invasive species included in the evaluation but results will be focused on perennial grass cover. Downy brome was the most dominant species in the check. Blue grama and needleandthread dominated in most treatments except for Rejuvra 2.5 where Western wheatgrass was most dominant.



Figure 3. Photo taken June 25, 2021. Green strips represent treated areas and brown strips indicate checks dominated with downy brome.