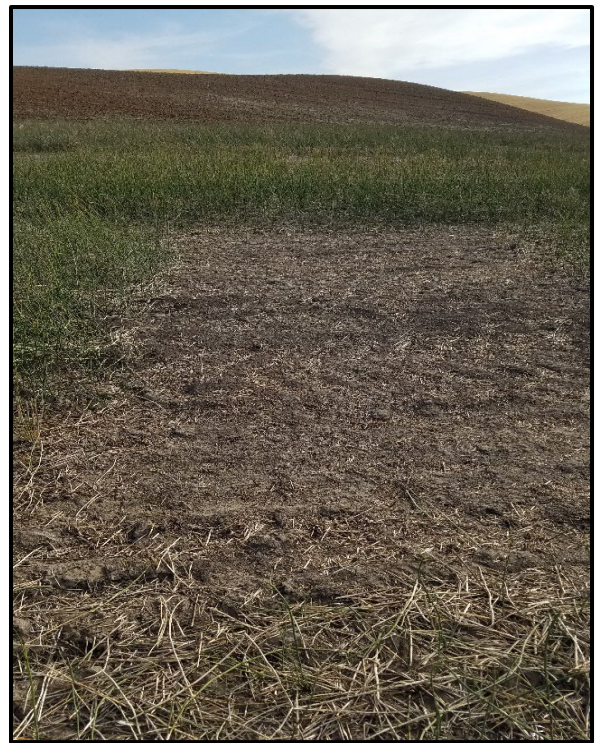


Finesse® Timing for Smooth Scouringrush Control in Wheat/Fallow Cropping Systems

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Finesse herbicide is effective for smooth scouringrush control when applied late spring in fallow; however, applications at other times may fit better in certain management strategies. Finesse is labeled for application anytime in fallow including just before fall seeding, and after one leaf but before the boot stage in wheat and barley. Smooth scouringrush stems usually begin emerging in May and persist until freezing temperatures in the fall. Therefore, it is possible that late fall or early spring applications of Finesse would be applied when smooth scouringrush is not present or not actively growing and the efficacy of these timings is unclear.

We began a study in 2022 at two farms comparing fall and spring applications of Finesse for control of smooth scouringrush. Finesse was applied in the fall to standing stems or bare soil before fall seeding. In the spring, treatments were applied before stem emergence when the winter wheat was tillering and then later when the smooth scouringrush stems were emerging and the wheat had developed a flag leaf. Trials were initiated near Edwall on the Justin Camp farm and near Steptoe on the Mark Hall farm. Each site is in a no-till winter wheat/spring wheat/ fallow rotation. The Edwall site is in a gentle northwest-sloping draw bottom with good moisture and well-drained soil, which is classified as a Broadax silt loam. Soil organic matter and pH measured 2.9% and 5.0, respectively. The Steptoe site is on a gentle north-facing slope of soil classified as a Palouse-Thatuna silt loam. Soil organic matter and pH measured 2.7% and 5.0, respectively. Both sites average around 16 inches of precipitation per year.



Smooth scouringrush and bare ground plots before fall seeding near Steptoe, WA.

At each site, plots measured 10 by 30 ft and were arranged in a randomized complete block design with four replications per treatment. All herbicide treatments were applied with a hand-held spray boom with six nozzles on 20-inch spacing and pressurized with a CO₂ backpack. Spray output was 15 gpa at 40 psi through TeeJet® AIXR110015 nozzles at 3 mph. Bare ground treatments were applied to plots where all vegetation had been mowed and removed with a rake. Fall treatments were applied on September 14 and 22, and early spring treatments were applied on May 8 and 11 at Steptoe and Edwall, respectively. Late spring treatments were applied on May 18 at both locations; however, smooth scouringrush stems had not yet emerged at Steptoe. This was likely associated with hard dry soil and dry spring conditions observed in 2023.

Treatments were evaluated in July 2023 by counting smooth scouringrush stems in two 1.2-yd² quadrats per plot in the winter wheat crop ahead of harvest. At both locations, fall-applied Finesse plus PowerMax resulted in better control when applied to stems rather than to bare soil. This would suggest that foliar uptake is more effective than soil uptake alone. At Edwall, Finesse applied alone was less effective than Finesse plus PowerMax applied to stems in the fall, but no difference was seen at Steptoe as all fall foliar-applied Finesse treatments resulted in zero stem density. At Steptoe, the fall-applied PowerMax alone treatment reduced stem density compared with the nontreated check but was not different from the bare ground treatment or the spring treatments. At Edwall, where greater overall densities were seen, PowerMax alone in the fall was not different from the nontreated check. The spring treatments resulted in lower densities at both locations than the nontreated checks but were not yet as effective as fall-applied foliar Finesse applications. At Steptoe, smooth scouringrush did not emerge until after the late spring treatments were applied, so there was no foliar uptake for these treatments. The spring treatments, so far, are less effective than the fall foliar applications, but they may need more time to be effective. It appears that preplant foliar Finesse applications in the fall can reduce smooth scouringrush density the following year, and it is important to apply to green standing stems. It is too early to determine the efficacy of the spring applications in the crop, but all treatments will be reevaluated in 2024.

Table 1. Effect of herbicide timing on smooth scouringrush density.

| Treatments* | Timing | Target | Edwall | Steptoe |
|---------------------------------|-------------------------|----------------------------------|--------------|---------|
| | | | stems/yard** | |
| Finesse + PowerMax + NIS | Fall | Standing stems | 14 e | 0 c |
| Finesse + PowerMax + Syl-Coat | Fall | Standing stems | 13 e | 0 c |
| Finesse + PowerMax + NIS | Fall | Bare ground | 34 d | 21 b |
| PowerMax + NIS | Fall | Standing stems | 137 a | 12 b |
| Finesse + NIS | Fall | Standing stems | 34 d | 0 c |
| PowerMax + NIS fb Finesse + NIS | Fall fb early spring | Preemergence to stems in crop | 64 c | 11 b |
| PowerMax + NIS fb Finesse + NIS | Fall fb Late spring | Stems in crop | 97 b | 11 b |
| Nontreated check | | | 141 a | 67 a |

*Finesse applied at 0.5 oz/A in fall in fallow and 0.4 oz/A in spring in crop; PowerMax was applied at 32 oz/A; NIS and Syl-Coat were applied at 0.5% v/v. All PowerMax applications included NH₄SO₄ at 17 lb/100 gal. fb=followed by.

**All stem densities for each site followed by the same letter are not statistically different.