

Herbicide Options for Weed Burndown in Alfalfa

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Spring weed control in established alfalfa (*Medicago sativa*) has historically relied heavily on paraquat. However, new regulatory safety measures introduced to ensure the safe use of paraquat may deter growers from relying on paraquat. Field studies were conducted in Idaho and Utah in 2023 and 2024 to assess weed control, alfalfa recovery, forage accumulation, and nutritive value following treatment with carfentrazone, saflufenacil, pyraflufen, tiafenacil, diuron + hexazinone, glyphosate, and paraquat. The main goal was to assess whether carfentrazone, saflufenacil, pyraflufen, tiafenacil, diuron + hexazinone could be viable alternative herbicides to paraquat that growers can use for weed control in spring in established alfalfa. Although carfentrazone, saflufenacil, and tiafenacil caused greater alfalfa injury and height reduction within the first three weeks after herbicide application, the alfalfa recovered within six weeks after herbicide application. At the Idaho site, all herbicides evaluated provided similar or better weed control than paraquat, and there was no difference in alfalfa hay forage accumulation or nutritive value among the herbicides, especially when compared with paraquat treatment. At the Utah site, saflufenacil and diuron + hexazinone reduced alfalfa hay forage accumulation when compared to the paraquat treatment, suggesting that farmers would have to wait longer to enable alfalfa to recover after applying saflufenacil or diuron + hexazinone. Overall, these results show that carfentrazone, pyraflufen, saflufenacil, and tiafenacil are promising alternatives to paraquat for weed burndown in alfalfa.