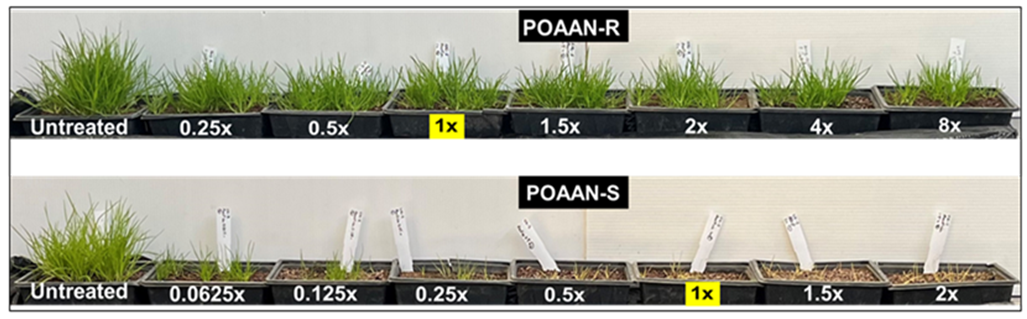
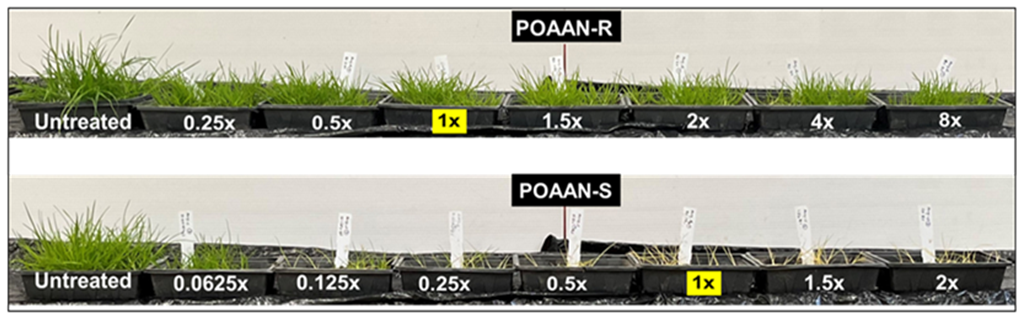
**Supplementary Figure S1.** Dose response assays for sensitive (POAAN-S) and resistant (POAAN-R) populations of *Poa annua* treated at 2-to-3 leaf stage with a range of ± recommended field rates of mesosulfuron-methyl + iodosulfuron-methyl 15 + 5 g ai ha-1.



**Supplementary Figure S2.** Dose response assays for sensitive (POAAN-S) and resistant (POAAN-R) populations of *Poa annua* treated at 2-to-3 leaf stage with a range of ± recommended field rates of pyroxsulam 18.8 g ai ha-



**Supplementary Figure S3.** Symptoms of sensitive (POAAN-S) and resistant (POAAN-R) populations of *Poa annua* following application of recommended field rate (15 + 5 g ai ha-1) or 1.5 of recommended field rate (22.5 + 7.5 g ai ha-1) of mesosulfuron-methyl + iodosulfuron-methyl with or without malathion. Plants were treated at 2-to-3 leaf stage. POAAN-R had 100% surviving plants at both rates, while POAAN-S were totally susceptible (i.e. all treated plants died) .



Supplementary Figure S4. Symptoms of sensitive (POAAN-S) and resistant (POAAN-R) populations of *Poa annua* following application of recommended field rate (18.8 g ai ha-1) or 1.5 of recommended field rate (28.1 g ai ha-1) of pyroxsualm (not registered in Ireland for *P. annua* control) with or without malathion. Plants were treated at 2-to-3 leaf stage. POAAN-R had 100% surviving plants at both rates, while POAAN-S were totally susceptible (i.e. all treated plants died).

