

Master thesis weed science

Sensitivity variation in silky bent grass (*Apera spica-venti*, (L.) P.Beauv.) to pinoxaden and propaquizafop (HRAC Group A)

The objectives of this study is to describe the intra-specific variation in herbicide response of ***A. spica-venti*** when subjected to **pinoxaden** (selective in cereals, used **with safener**) vs. **propaquizafop** (not selective in cereals). The distributions of logLD₅₀- and logGR₅₀-estimates is used as a potential indicator for early resistance evolution. In the experiments, different biotypes (seed collections of batches from farms in different regions) are used and their herbicide reactions is assessed in dose-response experiments to estimate the LD₅₀ (dose at which 50% of the test plants are dead) and ED₅₀ (dose at which 50% of the biomass of untreated plants are reached). The reactions between the biotypes and both herbicides are compared.

The determination of the variability of important problematic weeds in baseline sensitivity studies is necessary to know the basic sensitivity of herbicides at an approved field application rate and to better estimate the risk of resistance evolution.

Therefore, this work will deal with an important weed species in the Central European cereal growing areas: ***A. spica-venti***. Resistance to the **HRAC Group B** is already widespread. Resistance to **HRAC Group A** is now rare, but reports about resistance are increasing. The work deals with an agronomically very current and important topic.

If you are interested, please contact:

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