

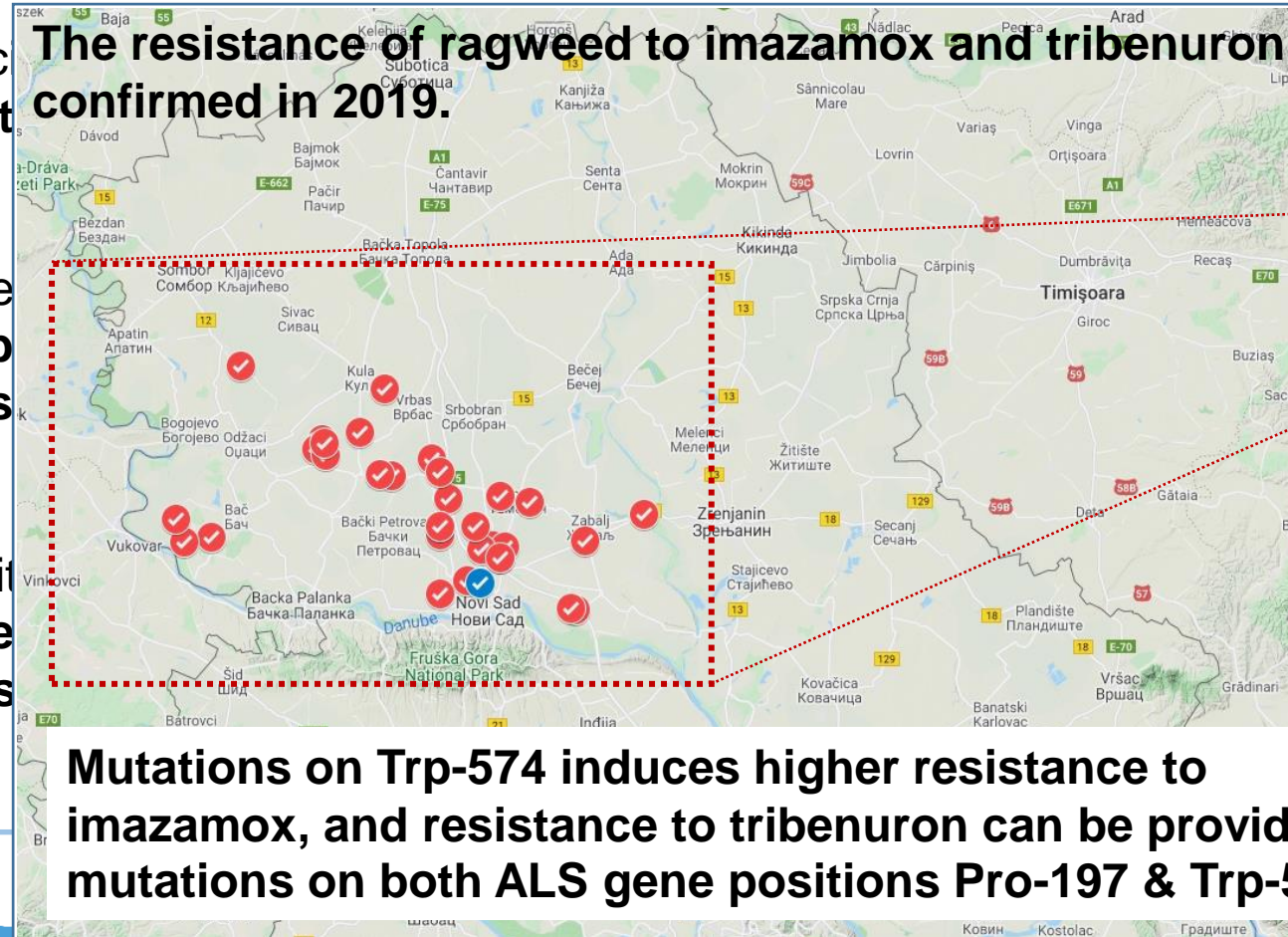
# IMPORTANCE OF HALAUXIFEN-METHYL FOR INTEGRATED WEED MANAGEMENT IN SUNFLOWER, WITH SPECIAL EMPHASIS ON THE CONTROL OF RESISTANT COMMON RAGWEED TO ALS INHIBITORS

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- The impact of **weeds** (especially sunflower production and integrated weed management) was **underestimated!**
- The most important sunflower weed family as sunflower, **with typical weeds to control invasive species** (*artemisiifolia*), etc.
- Relying mostly on ALS inhibitors in the last two decades, **some weeds have had a negative impact on the sunflower production**

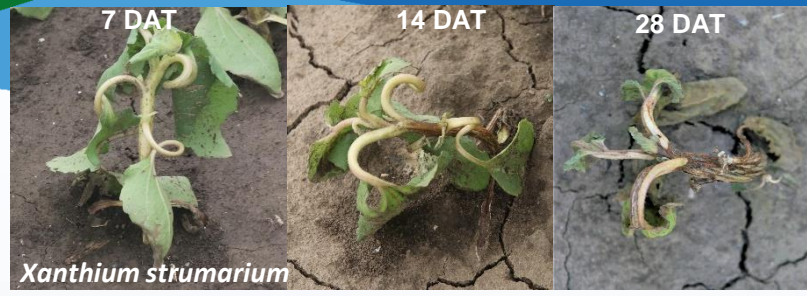
**The resistance of ragweed to imazamox and tribenuron in Serbia was confirmed in 2019.**



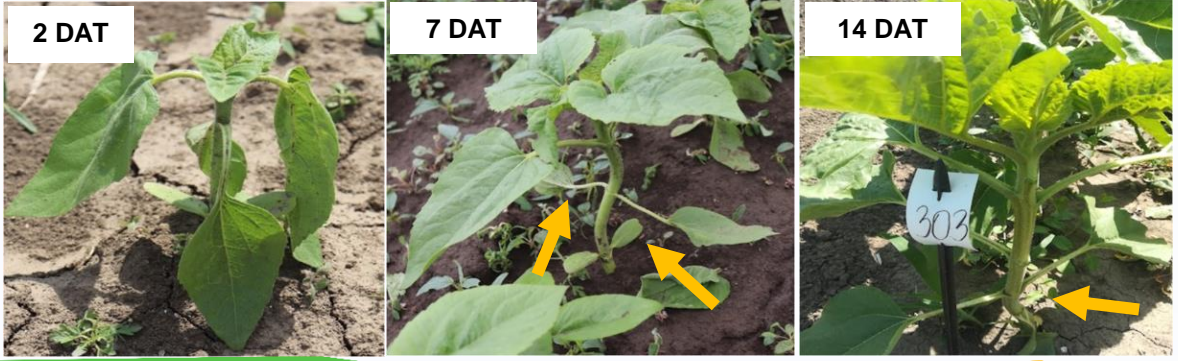
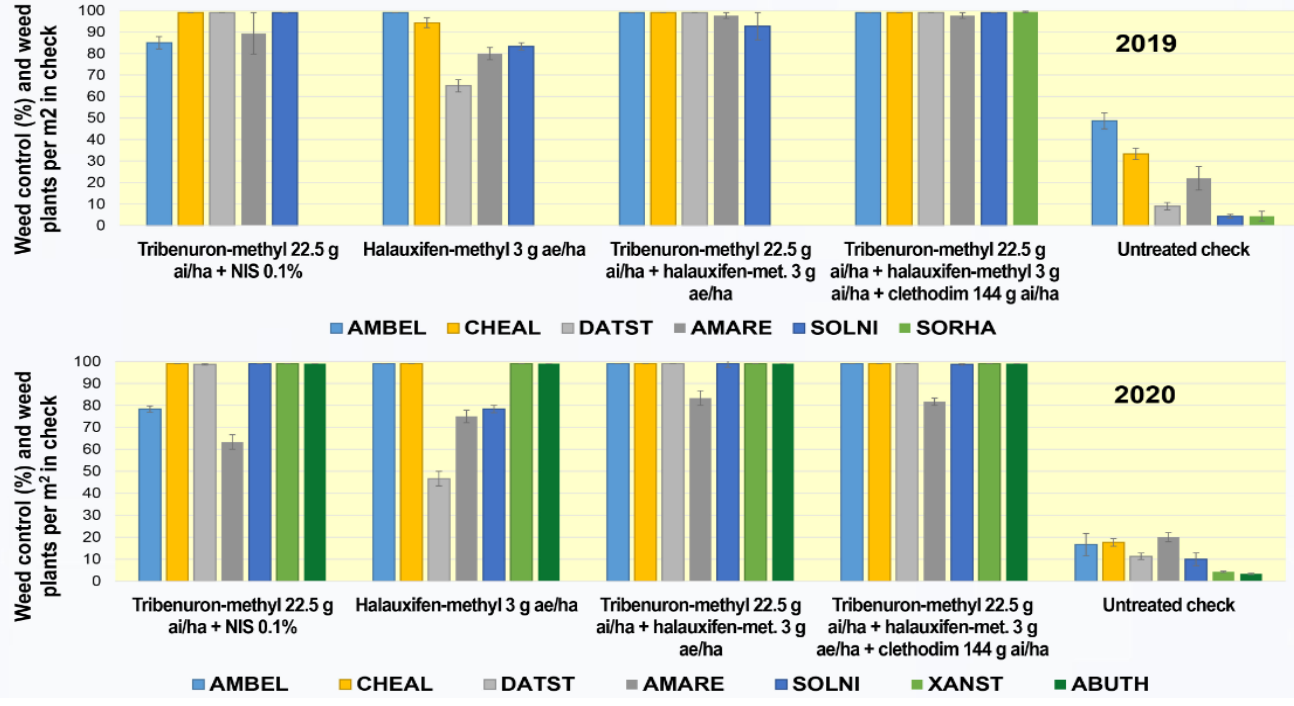
**Mutations on Trp-574 induces higher resistance to imazamox, and resistance to tribenuron can be provided by mutations on both ALS gene positions Pro-197 & Trp-574**



# HALAUXIFEN-METHYL (3 g a.i./ha)



- A new post-emergent herbicide and the only member of synthetic auxins that can be used in all sunflower hybrids.
- **Important part of integrated weed management** because new mode of action in sunflower, excellent control of some important weeds and wide window of application, etc.
- Trials with halauxifen-methyl based products in Serbia from 2017-2020.
- Exhibited **transient acceptable phytotoxicity to sunflower after 1 and 2 weeks**, and afterwards the symptoms disappeared without affecting the seed yield and oil content.





## CONCLUSIONS

- The results strongly suggest that sunflower growers will have to use IWM where halauxifen-methyl will play a significant role.
- The mixtures of halauxifen-methyl and imazamox or tribenuron-methyl based products is excellent approach in herbicide resistant weed management and control of important weeds, such as ALS-resistant common ragweed.

