

# SORGOLEONE – THE MAIN ALLELOPATHIC COMPOUND FROM SORGHUM

## Summary

This paper presents principles of sorghum (*Sorghum spp.*) allelopathy and its importance in agroecosystems. Sorghum is cereal grain plant of the family *Poaceae* and one of the most important crops in the world. Sorghum produces a large variety of secondary metabolites that determine its high allelopathic potential. Most of them are classified as hydrophilic phenolic compounds. Mature root hairs of sorghum exude oily droplets, containing hydro-

phobic sorgoleone and its lipid resorcinol analogue. Sorgoleone mode of action in plants involves inhibition in photosynthetic and mitochondrial electron transport chain. Allelopathic properties of sorghum are successfully used in suppressing weed growth in integrated pest management system as a cover crop, green manure, sorghum water extract or as residue in non-tillage farming. In future sorgoleone may be used also as alternative, ecological herbicide.