

ABSTRACT

STATUS OF TERRESTRIAL WEEDS THAT EXIST AND DISPERSE AT IRRIGATION CHANNELS OF AYDIN PLAIN AND MANAGEMENT OF *Phragmites australis* (Cav.) Trin. ex Steud. (COMMON REED)

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In this study, weed species at the Aydın Plain irrigation channel banks, viability and dispersal of the seeds of the most frequent ones in water were investigated. Also, effects of filtrated irrigation water on weed emergence, weed species in the sediment and effects of glyphosate on different growth stages of *Phragmites australis* (common reed) were studied. In surveys that were conducted in April and September 2012, 120 different weed species were determined. Seeds of some weeds were viable even after 12 months in water, however variable results were obtained based on weed species. According to first year results of the study to evaluate the effects of filtrated irrigation water on the weed emergence, usage of 18 mesh (941 µ) and upper screen size were found sufficient to prevent to weed seeds. In 66 dm³ sediment samples, more than 15.000 seeds were recorded in either in 2 years. The weed species in the sediment were demonstrated similarities to local vegetation. Most of the studied weed seeds were able to disperse by water. They floated usually at surface water. *Sorghum halepense* was supposed to be one of the most frequent weed species at irrigation channel banks in the coming years. Application of glyphosate to common reed at 30-60 cm in height were found as the most effective practice.

Key words: Weed, dispersal by water, seed viability, seed transport, irrigation water, irrigation channel, sediment, glyphosate, *Phragmites australis*, chemical control