Weed flora of common crops in desert reclaimed arable lands of southern Egypt

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Abstract:

Abstract The weed flora of common crops of the desert reclaimed arable lands in southern Egypt was studied. Field data were collected from three major crops: wheat as a winter crop, millet as summer crop and alfa-alfa as a perennial crop. 146 stands (fields) from 8 sites in Qena Governorate were permanently visited during 2013 and 2014. A total of 169 species (105 annuals, 64 perennials) of the vascular plants belonged to 121 genera in 39 families constituted the flora of the study area. The most species-rich families were Poaceae, Asteraceae, Fabaceae, Brassicaceae, Chenopodiaceae, and Euphorbiaceae. Annual herbs were the best represented life form, followed by annual grasses, trees and perennial shrubs. Ballochore and pogonochore were the most represented dispersal types of seeds, while cyclochore and auxochore were the least represented. 26 species were categorized as dominants (highest Q-values), where they have a wide ecological range of distribution. Classification of the associated vegetation in 146 stands by cluster analysis yielded 5 vegetation groups (A-E); the vegetation groups A and E were mainly represented by weeds in wheat and alfa-alfa (winter season), while most the stands of groups B, C and D were represented by species in millet and alfa-alfa (summer season). These groups were separated along the first two axes of Bray-Curtis ordination.

Keywords:

Keywords: Agroecology, life-form spectrum, summer crop, winter crop, segetal flora, diversity, weed vegetation, crop type.

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