of previous research detailing the generally detrimental effects on yield due to previous crop water use in dryland semi-arid environments in the Central and Southern Great Plains should be used to guide decisions about cover crop use in these regions. If cover crops are needed to augment existing crop residues to provide erosion protection or for supplemental livestock feed, the added expense generally seen for cover crop mixtures compared with single-species plantings (Nielsen et al., 2015) is not likely to be justified. If the cover crops are being grown primarily to provide soil surface protection against erosion, the recommendation of Unger and Vigil (1998) should be followed in semi-arid production regions: cover crops should be terminated as early as possible after acquiring sufficient biomass and ground cover to provide erosion protection, thereby minimizing detrimental effects on subsequent crop yields due to cover crop water use.

References