Multiple herbicide resistance in winter grass (*Poa annua*) in Australia

Peter Boutsalis[#], Jenna Malone and Christopher Preston
The University of Adelaide and [#]Plant Science Consulting, PMB 1, Glen Osmond,
South Australia 5064, Australia
(peter.boutsalis@adelaide.edu.au)

Summary Winter grass (*Poa annua*) is a genetically diverse winter annual species. A native of Europe it is widespread across most continents, predominantly in temperate countries infesting orchards, nurseries, seed crops, horticultural crops, turf and golf courses. Winter grass colonises of disturbed areas including annual crops in higher rainfall areas. It has adapted to heavy grazing and close mowing. Plants can mature and set seed at 6 mm height.

Winter grass is the most challenging weed species in the USA, Japan and Australia in turf and golf courses. It is more prevalent between early autumn and late spring in Australian golf courses. The most common form of weed control in turf and golf courses are herbicides because alternative weed control methods are limited. Heavy herbicide pressure in golf courses (predominately in the fairways) has resulted in the confirmation of resistance to several mode of action herbicides in South Australia, Victoria and New South Wales. Most resistance has occurred to post-emergent herbicides selective in couch, the dominant turf species of fairways. Resistance has been confirmed to Group B, C, D, M and Z herbicides with some biotypes resistant to multiple mode of action herbicides. Management of resistant biotypes includes strategically using diverse mode of action herbicides.

Keywords Winter grass, *Poa annua*, multiple herbicide resistance, golf, turf.