Efforts towards engaging communities to promote the benefits of biological control research and implementation in South Africa

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In the last decade, biological control in South Africa has evolved from a classical applied science, allied to an extension service, to a more community engagement-based activity. Therefore, capacity building is important for the sustainability of biological control research and its implementation. In South Africa, a broad approach has been taken to build capacity in weed biological control, starting at grass-roots level with primary and secondary school learner programmes, through to developing research capacity at the tertiary level and enhancing technical capacity through adult education. Non-specialists are empowered through access to knowledge. The dissemination of accurate information through the most appropriate outlets has become increasingly important, including non-traditional science communication through the internet and, more importantly, social media, which has the potential to reach a far wider audience. Public understanding of biological control has the potential to contribute significantly to the green and knowledge economies of South Africa, but relies on government support for the sustainability of this discipline.

Key words: community engagement; community outreach; researcher community; knowledge dissemination; social benefits, economic benefits.

INTRODUCTION

Weed biological control (biocontrol) has been practiced in South Africa since 1913 and is generally considered the most cost effective, safe, and therefore sustainable, method of managing invasive alien plants (Moran *et al*. 2005; De Lange & van Wilgen 2010). Since 1913, 93 biocontrol agent species have been released and established on 59 invasive weeds (Zachariades *et al*. 2017). Prior to 1995, biocontrol scientists were responsible for pre-release research into exploration for biocontrol agents and the development of these through to mass-rearing, release, monitoring and implementation. The time and finances available for proper follow through on each project was limited, which constrained the scientists to research activities only. Government agricultural extension services supported biocontrol efforts through communication with landowners and distribution of agents, but this was often insufficient to adequately assist biocontrol efforts in distributing and establishing agents (Gillespie *et al*. 2004).

The Working for Water programme, launched by the national government in 1995, provided the opportunity to expand the remit of weed biological control. More implementation was undertaken, greater capacity built and, importantly, the profile of biocontrol was raised amongst the stakeholders concerned with the management of invasive alien plants. The National Department of Water Affairs and Forestry initiated the Working for Water programme with the main objectives of creating work through physically clearing infestations of invasive alien plants from water catchments across the country, to reduce loss of water through evapotranspiration (van Wilgen *et al*. 1998). Through this programme, more money was invested in the management of invasive species including support for biocontrol; thus research and implementation capacity was built, and

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