



Improved Phalaris varieties for productive and profitable landscapes

Phalaris (*Phalaris aquatica* L.) is a long-lived perennial grass exploited as a pasture species mainly for beef and sheep grazing.

Using expertise in pasture improvement breeding and in collaboration with industry research partners, we have released 12 improved varieties of Phalaris.

The challenge

Unimproved Phalaris has deficiencies such as the tendency to shed seeds and have low yields of harvestable seed. Our plant breeders identified a need for improved Phalaris varieties that would overcome these characteristics and be more productive, persistent, and hardy for the grazing industries of Australia.

Improved varieties for greater grazing tolerance, persistence, seed production and productivity.

The response

Our Phalaris breeding program commenced in the late 1950s and conducted the most effort globally for many decades. Improved varieties were released that successfully extended the potential adaption zones of Phalaris and improved its seasonal growth, grazing tolerance, persistence, seed production and grazing productivity. This was achieved through the discovery and exploitation of new domestication, production and persistence traits.

The impact

Our improved Phalaris varieties have been widely adopted across the Australian landscape. It is estimated that

between 1990 and 2020, 4.4 million kilograms of certified CSIRO Phalaris seed has been sold, equating to approximately 1.48 million hectares.

A recent evaluation found that the program has delivered significant benefits to date and has the potential to provide \$5,163 million in first round economic impact (present value terms) between 1989 and 2039. This significant return is reflective of the long investment period delivering realised and prospective benefits across at least five decades. Benefits are also expected through mitigation of farm enterprise risk and through a number of ecosystem services including improved ground cover and deep drainage.

Dr Richard Culvenor
Principal Research Scientist,
Agriculture and Food
+61 2 6246 5092
richard.culvenor@csiro.au

Dr Anne-Maree Dowd
Executive Manager,
Performance and Evaluation
+61 7 3327 4468
anne-maree.dowd@csiro.au

Australia's National
Science Agency