Question on Notice

No. 1227

Asked on 11 October 2023

MR N DAMETTO asked the Minister for Agricultural Industry Development and Fisheries and Minister for Rural Communities (HON M FURNER)—

QUESTION:

With reference to the invasive weed Cyperus Aromaticus, common name Navua Sedge, and answer to Question on Notice No. 1329 from 2022—

Will the Minister provide an update on behalf of the Department of Agriculture and Fisheries on the progress with research undertaken regarding herbicide and biological solutions for the control of the weed that continues to spread across Queensland?

ANSWER:

The Invasive Plants and Animals Research Group in Biosecurity Queensland has recently published summaries of the Navua sedge research program in its annual Research Highlights Invasive plants and animals research 2022-23 (the report). Copies of the report were distributed to the departmental stakeholder consultative committee, the Research Review Committee, for dissemination to partner Local Governments and other industry and community stakeholders throughout Queensland in October 2023. The publication is available online at https://www.publications.qld.gov.au/ckan-publications-attachments-prod/resources/58850594-4a67-476f-a246-6b0c4a6c4c93/research-highlights-invasive-plants-animals-2022-23.pdf?ETag=e7421ada7c1f90fbf182a4955dd59dc6. The Navua sedge research program has three components which are described below.

Classical biological control research

The biological control project (page 32 of the report) aims to introduce insects or pathogens from Navua sedge's native range to control Navua sedge in Queensland. The research is conducted in collaboration with the University of Southern Queensland and the Centre for Agriculture and Biosciences International (CABI), United Kingdom (UK). Native range surveys have been completed and prospective biological control agents for Navua sedge have been identified from Africa. A flower infecting smut disease (*Cintractia cintractia*) and a leaf and stem infecting rust disease (*Uredo kyllingae-erectae*) have been prioritised for further testing.

The two pathogens from Nigeria, Tanzania and Madagascar were exported to CABI, UK. The test plants that CABI requires for host specificity tests were exported to the UK from Australia. Host specificity tests for the two pathogens are currently in progress in quarantine in the UK. Host specificity tests for the flower smut are likely to be completed in June 2024 and the host specificity tests for the leaf and stem rust are likely to be completed by June 2025. If proven host specific, an application seeking approval for their release will be submitted to relevant regulatory authorities in Australia.

Herbicide research

The Impact and management of Navua sedge research project (page 39 of the report) is conducted in collaboration with the Federation University (Ballarat, Victoria). A glasshouse trial to screen three herbicides and their combinations (14 treatments x 3 growth stages x 5

replications) commenced in October 2021 has been completed. Based on the glasshouse trial, seven promising herbicide treatments have been selected for field evaluation.

Herbicide field evaluation trials commenced in three sites, Gardenvale (sugarcane farm), Malanda (beef grazing property) and Ingham (wasteland) in far north Queensland in June 2022 and are continuing. The trials (8 herbicide treatments x 2 growth stages of Navua sedge x 3 replications x 3 sites) are expected to be completed by March 2024.

Mycoherbicide research

The research is conducted in collaboration with the University of Southern Queensland. Multiple surveys for endemic fungal pathogens on Navua sedge were conducted in the Queensland wet tropics. Several fungal isolates (>40 isolates) have been obtained from diseased Navua sedge plants in the field, and the majority of them have been identified. None of the fungal isolates demonstrated sufficient pathogenicity in glasshouse tests to warrant further study as prospective mycoherbicides. Hence, no further field evaluation will be pursued.