North Australia Beef Research Council

Northern Beef Research Update Conference

Bush to bright lights

19–22 August 2019

Conference program

BRISBANE convention & exhibition CENTRE

expert events
Professional conference organiser

231 The re-emergence of dieback in pastures across Queensland

Stuart Buck

Department of Agriculture and Fisheries, Rockhampton QLD 4701

Introduction

Pasture dieback is a condition currently causing death of a range of sown and native pastures across large areas of Queensland's productive grazing lands. Pastures affected by this condition are rendered unproductive, leading to significant financial distress for affected graziers.

Symptoms of dieback in Queensland pastures

Initially, leaves of affected plants turn yellow and/or red starting at the leaf tips then progressing towards the stem. Plant growth is halted. Eventually death occurs typically in patches across the landscape. In some cases affected pastures regenerate naturally from the soil seed-bank. In other situations patches are colonised by broadleaf plants for some years after the episode.

History and current area affected by pasture dieback in Queensland

The earliest report of "dieback" in Queensland was in paspalum pastures near Cooroy (Summerville 1928). A mealybug was the suggested cause of this occurrence. The next report was around 1993-4 when dieback was recorded across central Queensland primarily in buffel grass pastures. Despite previous research (Graham and Conway 2000; Makiela 2008), no definitive causal agent(s) have been confirmed. Dieback in pastures has again re-emerged and recent outbreaks were first identified in 2012 in buffel grass pastures in central Queensland and in creeping blue grass pastures in central and coastal Burnett districts (Buck 2017). Most sown grass species are susceptible to dieback across Queensland. Observations have occurred from the Atherton tablelands in north Queensland, through eastern Queensland to the south-east corner of the state.

Accurate identification of pasture dieback is problematic due to overlap of similar symptoms from dry weather and pasture rundown. Not all graziers are ware that they have dieback on their property and those who do, find it difficult to accurately measure the impact. Based on direct contact with over 120 graziers the area affected was estimated at around 35,000 ha in mid-2017 (Buck 2017). A recent survey of 88 graziers has estimated the affected area at almost 60,000 ha (AgForce 2019). Anecdotal observations suggest that the area affected by dieback is increasing and considered to be much larger than reported. Continuing research is needed to identify the causal agent(s) and effective management options for graziers to restore productivity.

References

AgForce 2019. Pasture dieback survey 2019. AgForce, Brisbane, Qld.

Buck S. (2017). Pasture dieback: past activities and current situation across Qld. DAF, Brisbane Qld.

Graham T. and Conway M. (2000). Sustainable production from sown pastures. PDS annual report 1999 – 2000. DPI Brisbane, Qld.

Makiela S. (2008). Studies on dieback of buffel grass (*C. ciliaris*) in central Queensland. PhD Thesis. Central Queensland University, Rockhampton.

Summerville, W. (1928). Mealy bug attacking Paspalum grass in the Cooroy district. Qld Agric. J. 30, 201-209.