

# WeedScan - a website and smartphone app for identifying, reporting and managing priority weeds in Australia

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**Summary** Mobile apps like PlantSnap and PictureThis have revolutionised plant identification through artificial intelligence, which can analyse a plant photo and instantly suggest what the plant may be. The potential of accessible, rapid diagnostic tools to aid the early detection of new weeds is clear; however, existing plant identification apps are often paywalled and typically do not tell users whether their plant is a weed, link them to locally-relevant weed management information or facilitate the reporting of priority weeds to government weeds staff. To bridge this gap, WeedScan is being developed by the Centre for Invasive Species Solutions, CSIRO and the NSW Department of Primary Industries (DPI) with input from other states and stakeholders. The first release of the WeedScan website and smartphone app is scheduled for mid-2023. WeedScan's artificial intelligence model is being trained by CSIRO to recognise approximately 300 priority weed species across

Australia and will help users to identify weeds from photos, with this aspect of the smartphone app working offline. Identification suggestions will include links to existing weed profiles, which will be filtered according to the user's state or territory if known. Additionally, users will be prompted to make a record if the weed is a priority in their state or territory. If a user records their weed observation, alerts will be sent to government weeds staff who have set up notifications for the weed in that state or local government area. Public WeedScan records will be visible on a map which can be viewed and searched by users. NSW DPI is continuing to scope WeedScan's functionality through user workshops across Australia. Once fully developed, WeedScan will be a valuable tool for farmers, agronomists, landholders, weeds officers and NRM groups to improve weed identification and management.

**Keywords** App, AI, identification, reporting