

Progress Report

Submitted by Julianne Hill, 4/6/13

Kwinana East RCSN Project KE12/13-3of4 'The economics of summer weed spraying and effects on soil water and soil N, for the Kwinana East RCSN Zone'

Project Proposal

The Kwinana East RCSN group decided after much deliberation that the project they wanted to fund will focus on grass management over summer, starting with questioning the value of summer weed control. Sites will be chosen that represent the major soil types throughout the zone and a benchmark data set of soil samples will be collected prior to harvest (this has been done in-kind by the host farmers). Soil moisture and soil nutrition will be the main focus of the data set. Weeds will be removed from half the trial site after the first summer weed germination, and the same data will be again collected. This will occur until the end of summer 2013.

Project Update

9 sites representing the majority of major soil types within the Kwinana West zone were selected for sampling.

Sites selected were:

Ty Kirby (Beacon) – sandy earth, clays and shallow loamy duplex

Matt Steber (Doodlakine) – sandy duplex

Tim Butcher (Bodallin) – sandy earths

Clint Della Bosca (Southern Cross) – shallow loam + gravel

Clint Della Bosca (Southern Cross) – heavier soils

Scott Dixon (Kellerberrin) – alkaline shallow duplex

Nick Gillett (Bencubbin) - calcareous loamy earths

Mick Caughey (Merredin) – calcareous loamy earths

Stuart Yandle (Narembeen) – deep loamy duplex

Most of the host farmers took soil samples in early November, then Precision Agriculture Australia (PAA) were contracted to carry out the rest of the sampling. Sites (2 per soil type) were all pegged in November, with a square being named Sprayed, and another square named Unsprayed.

Soil sampling was carried out again in December (collecting double samples for moisture tests at the same time), and each Sprayed site was sprayed with a high rate of Glyphosate to kill any summer germinating weeds from the early summer rains.

Three more visits from PAA were conducted with soils being collected for moisture testing, and also a further summer spray carried out. PAA also conducted EM38 over the sites.

Soil samples were collected from both unsprayed and sprayed squares being tested at each site at the last collection time by PAA. These were sent away to SARDI to undergo PredictaB testing and these have since been received back.

Each site will be hand harvested at harvest time to see if protein (for nitrogen), yield and any other quality parameters were affected by the spray or lack of summer weed control.

The trial is going according to plan at this stage with the bulk of the collections already having been undertaken.