



**LIEBE**  
GROUP  
Working together  
in Agriculture

# BEST BET MANAGEMENT OF AMELIORATED NON-WETTING SOILS FOR THE GERALDTON PORT ZONE (GPZ)

**Year:**

2016 - 2019

**Funding Provider:**

GRDC-RCSN

**Lead Organisation:**

**Collaborators**

Liebe Group  
DPIRD  
CSBP  
Mingenew Irwin Group (MIG)

**Location:**

**Aim:**

To investigate the best way to apply nutrients on a cultivated non-wetting soil.

**Project Information:**

Water repellence was a significant constraint to production in Western Australian (WA) broadacre farming systems. It was estimated that 6.9 million hectares are considered at moderate risk of water repellence, whilst 3.3 million hectares were considered at high risk, based on the area of coarse sands with low clay content (van Gool, 2008).

In the Geraldton Port Zone (GPZ), approximately 52% of the arable soils were at moderate to high risk of water repellence, with the Shires of Irwin (87%), Coorow (67%), Northampton (66%), Three Springs (62%), Carnamah (53%), and Perenjori (50%) all having 50% or more of their soils at medium-high risk.

This project looked closely at the impact of soil cultivation practices, which have been adopted to mitigate water repellency, on the interactions of potassium (K) and nitrogen (N) within the soil profile.

It was understood that cultivation practices can release an uneven 'burst' of nutrients throughout the soil profile, leading to potential nutrient deficiencies or toxicities in the first season after cultivation.

While this was widely understood, yet difficult to measure, it was the settling period greater than one season out of cultivation which requires further research and development.

## PROJECT FUNDERS



## REPORTS & LINKS

- Best bet management of nutrition on ameliorated non-wetting soils in the Geraldton Port Zone - Eneabba
  - Best bet management of nutrition on ameliorated non-wetting soils in the Geraldton Port Zone - Irwin
  - Best bet management of nutrition on ameliorated non-wetting soils in the Geraldton Port Zone - Marchagee
- Link to PDF**