

# CASE STUDY



## MOBILE APP UTILISING BARCODE SCANNER AND GPS FOR SOIL SAMPLES

**INDUSTRY:  
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### About CSBP

CSBP, a part of Wesfarmers Chemicals, Energy & Fertilisers, began manufacturing fertilisers in 1910. Since 1925, they have been conducting annual field research on fertiliser needs for WA soils and conditions.

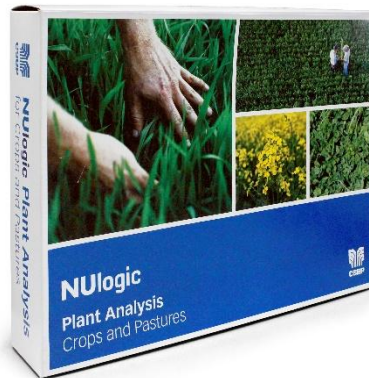
In 1971 CSBP introduced their soil and plant analysis service, which has evolved into the current NUlogic interpretation model.

Today CSBP offers a range of fertilisers developed specifically for local soil, including cropping fertilisers and liquid fertilisers.

CSBP is passionate about innovation and delivering fertiliser products to help meet the changing needs of Western Australian's farmers.

### Challenge

To help farmers making informed decisions for the optimal use of amounts and types of fertilisers, CSBP offers a soil analysis service, NUlogic. Soil sample testing kits include a bag and a paper form which is sent to the laboratory.



*Farmers use the NUlogic analysis kits for samplings sent to CSBP's lab to determine fertiliser requirements*

After the kit arrived at CSBP's lab, staff had to manually enter the form's details into their system, omitting provided GPS data due to the risk of transcription errors. As farmers don't always have enough time, sometimes kits arrived without all relevant information or even without a form or a means of identifying the customer. CSBP searched for a solution to decrease processing effort

required at the lab, and improve the level of information available in a shorter period of time.

### Solution

Lateral was asked to develop a custom iOS app for CSBP called "CSBP Sampling Pro". The farmer uses the free app on his iPhone or iPod touch, scans the barcodes affixed to the NUlogic kits' sample bags while GPS



*Samples are scanned via barcode scanner using the phone's camera*

☎ 1300 585 355  
info@lateral.com.au  
www.lateral.com.au

**Perth Head Office**  
First Floor, Lateral House  
292 Rokeby Road  
Subiaco, WA 6008

**Melbourne Office**  
Level 19  
644 Chapel Street  
South Yarra, Vic 3141

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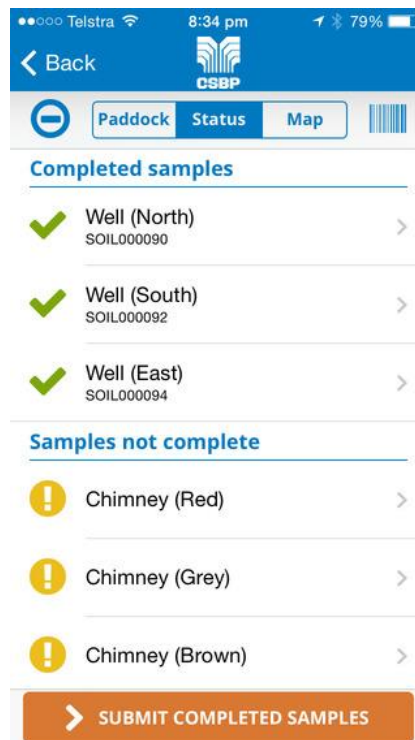
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information is automatically collected. On Google Earth, he can see where in the paddock the sample has been collected. Red markers indicate not complete samples, turning green when they have been completed. Existing sites can be imported, allowing to pre-plan their locations and delegate the collection work of sampling to staff. Users enter the paddock information before sending all information via the app to CSBP's laboratory.



The App records GPS data when soil sample packs are scanned at various locations in the paddock

In case there is no internet connection, the app records the information while offline, then synchronise once connected to the internet.



The comprehensive user interface guides the farmer through the process

A server component handles authentication, receives the submitted sample data and uploads it to CSBP's system. The completed data even arrives earlier at CSBP than the physical soil samples the farmer sent by mail.

## Result

- More streamlined workflow at the laboratory without manual entries saves time and increases accuracy
- GPS data captured while taking the sample allows for more accurate, granular and targeted fertiliser recommendations
- For CSBP, lab resources planning has become easier

The app "CSBP Sampling Pro" was released on Nov 18<sup>th</sup> 2014 to Apple's App Store. Versions for Android and Windows would be a possible future addition.

### Wayne Hiller, Services & Systems Manager at CSBP :

“Lateral have developed an Application that works. It is simple & intuitive to use but also sophisticated and technically well designed. The execution and development was completed on time, on budget and Lateral were really helpful in providing support and flexibility during the development to meet our customers' needs. Great work and thank you to all the team.”