

AgriCloud App

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- Farmers make decisions about when to plant maize every growing season.
- Many factors influence such a decision:
 - past experience;
 - current available information;
 - climatic conditions;
 - logistics & availability of inputs.
- Weather conditions change everyday
 - Need update advice according to new forecast
- Farmers only need info for their own farm





Objective of R4A project funded by NSO

“Compose the **best available** historical, actual and forecast **weather and climate data** and make it **easily accessible** for each food producer, African Met Services, added value providers and other potential clients in South Africa, at an affordable price.”



Rain for Africa (R4A) project developed

AgriCloud = a mobile phone 'Planting App'

- Addressing gaps in info available to small-scale farmers.
- AgriCloud App provides:
 - Planting / sowing advice
 - Spraying advice against pests and diseases
 - Collect rainfall data = crowdsourcing.
- Farmers only need info for their own farm
 - Register with precise location on map



Use Integrated System via R4A HydroNet Platform



End Users
Agri-Food

South African Weather Service
ARC • LNR
EXTENSION SERVICE

etc. etc. etc. etc.

Distribution Agents

HydroLogic

HydroLogic

Platform Provider

HydroLogic

ARC • LNR
Excellence in Research and Development

Mobile Water Management

etc. etc. etc. etc.

Application Developers

South African Weather Service
Weather data & App

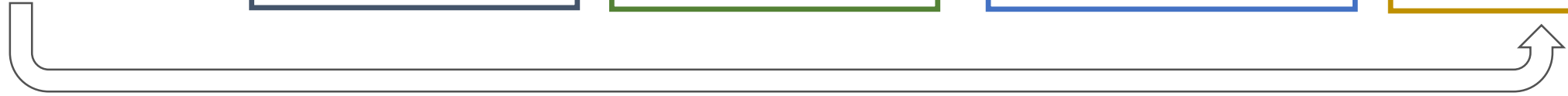
ARC • LNR
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eleaf
FEED THE WORLD
Evaporation Data

etc.

Agricultural models

Data Providers



Crowd Sourcing



WINE JOB

Weather Impact
Forecasting weather hazards

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Drents Overijsselse Delta
uw waterschap

Royal Netherlands Meteorological Institute
Ministry of Infrastructure and the Environment

Knowledge Providers

Based on Scientific Information

- Climate data grid for maize growing regions from ARC-ISCW & SAWS & NASA & ECMWF.
- Define start of planting window by long-term 'last frost date'.
- Use 25 mm rainfall received within 20 days as criteria for good planting conditions:
 - Previous 10d from measured rainfall
 - Future 10d from ECMWF rainfall forecast
- Indicate good time to start planting maize



Communication methods

- Delivered via cellular telephone:
 - For smart phone – use “app” from play store
 - For simple phone – use interactive “USSD”
(*Unstructured Supplementary Service Data*)
- Targeting both farmers and extension:
 - Free system via feedback credits
 - Individual or Commercial subscription
 - Government bulk subscription
- Available in 9 South African languages
 - English, IsiXhosa, IsiZulu, Sepedi, Sesotho, Setswana, Tshivenda, Xitsonga, Afrikaans

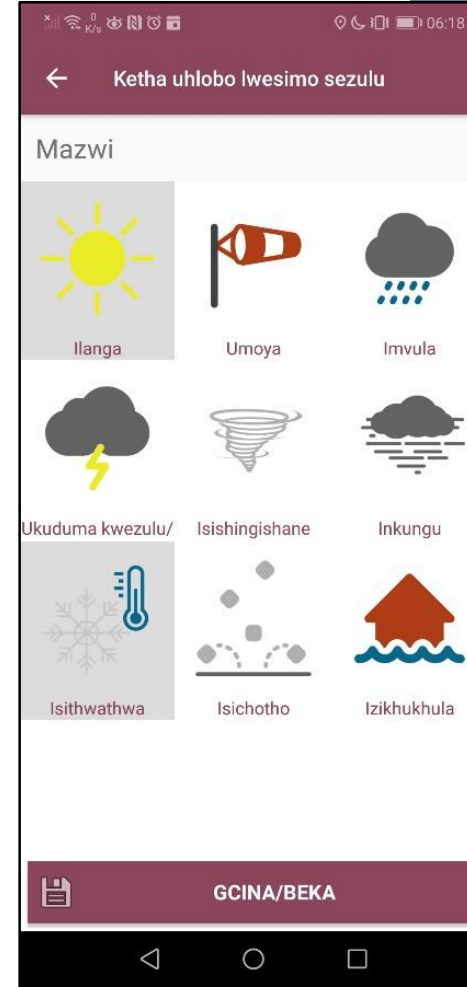


Technical Aspects

- ARC – Develop & provide advisories
 - via API (Application Programming Interface)
 - using *REST* web services (*Representational State Transfer*)
- *USSD* service provider access web services to supply info in *SMS*
(*Short Message Service = text message of 160 characters*) Dial a simple code, & receive localized advisories

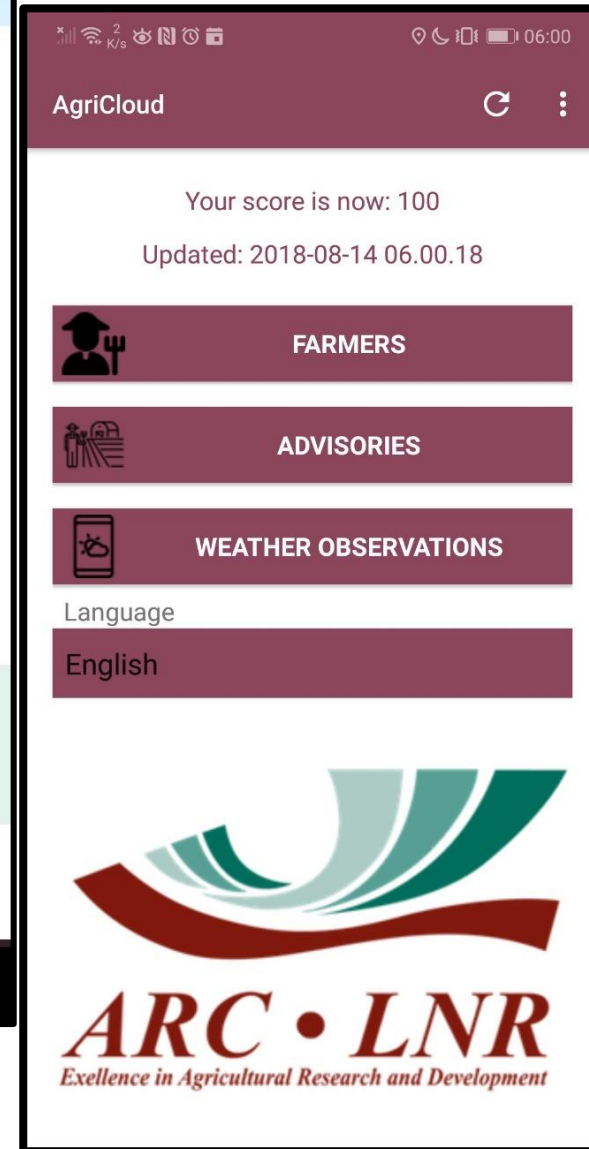
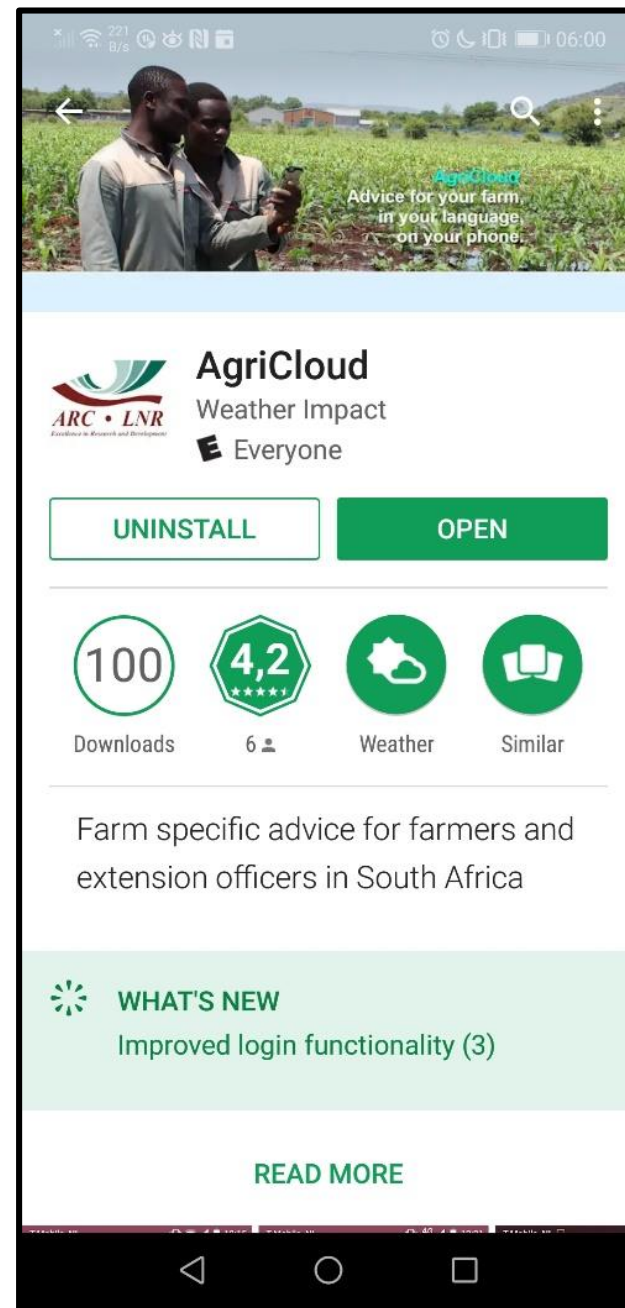
Crowdsourcing

- Farmers & extension register for use
- Contact database with:
 - Cell phone number for farmer or extension worker
 - Coordinates = specific location of farm
 - Accumulate credits
- Collect weather info via:
 - Qualitative observation using symbols
 - Manual measured rainfall amounts – in Version 2
- Provide local info to weather forecasters

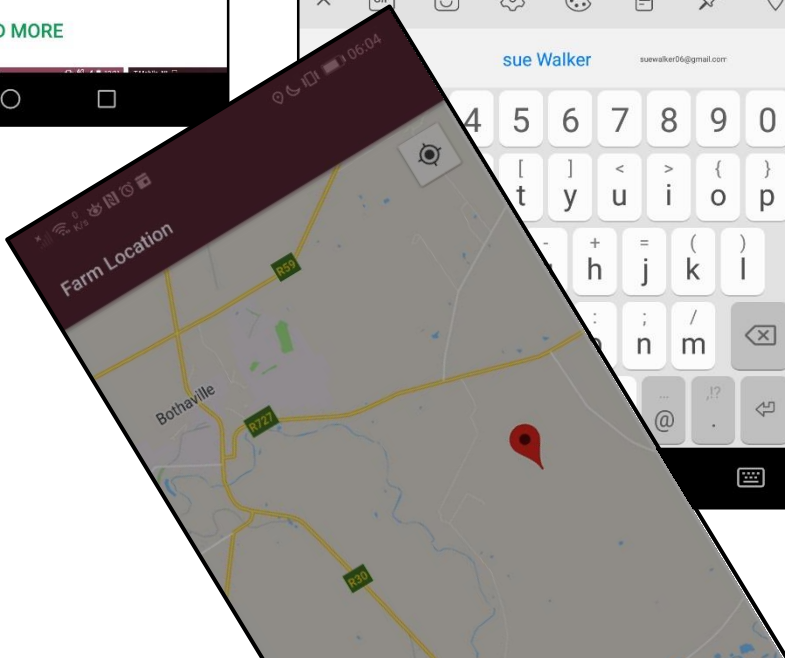
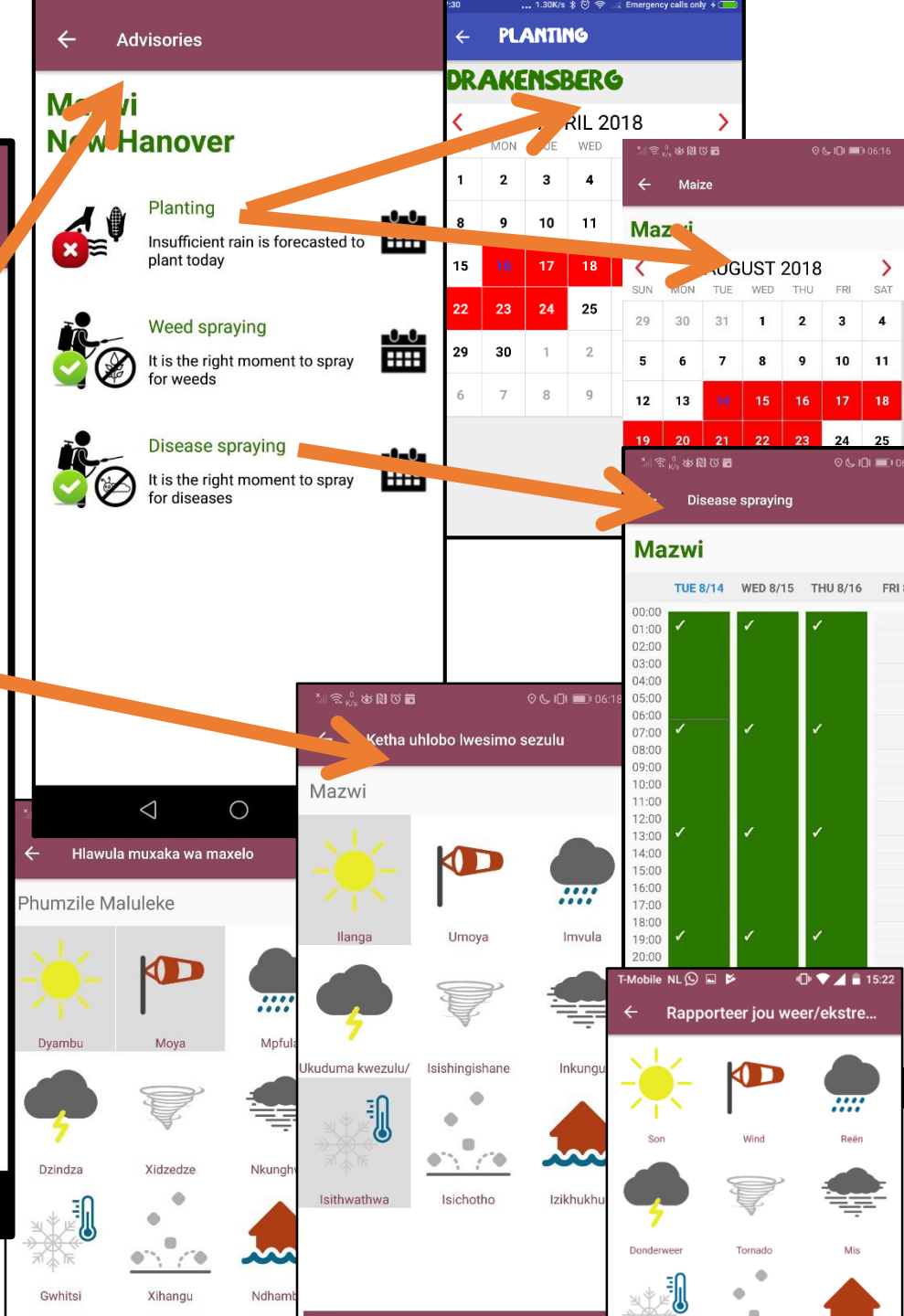
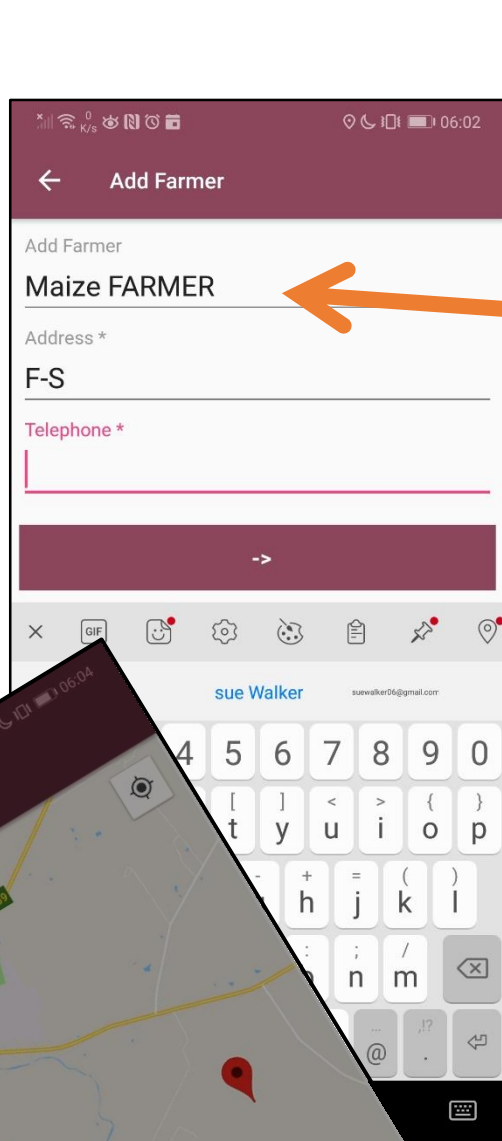
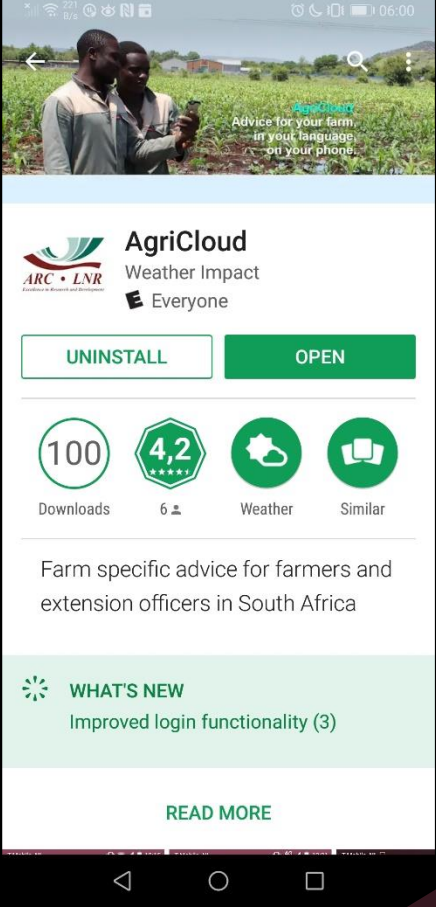


- Download from Google App Store
- Search and install:

- “AgriCloud”



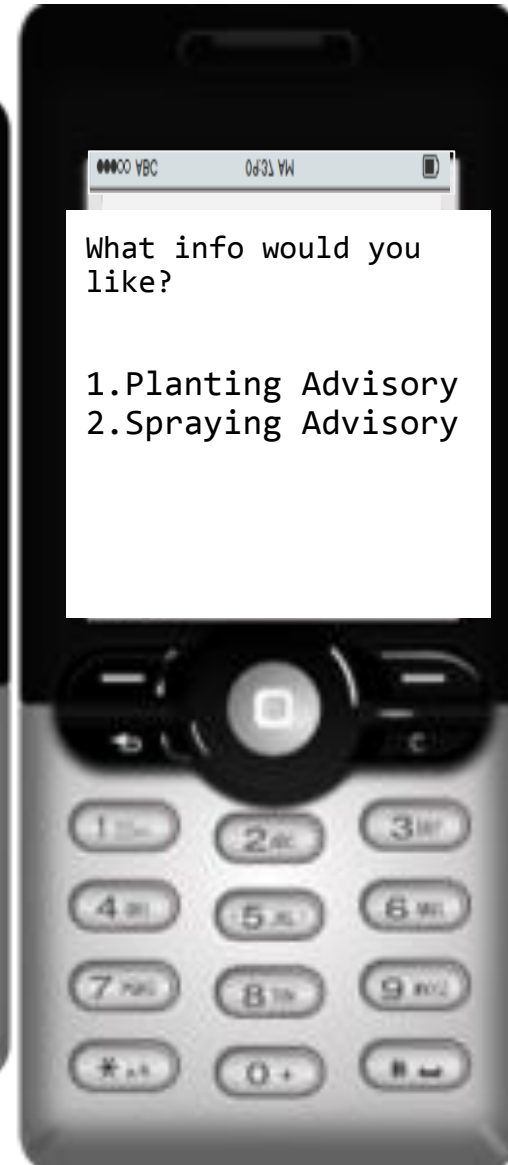
AgriCloud App (8-2018)



AgriCloud USSD to get Planting and Spraying info

Use *134*8383#

- Press call button
- Wait for reply
- Register with Tel# & town
- Follow instructions
- Choose advisory & send
 - 1=planting
 - 1=disease control
 - 2=weed control
 - 2=spraying
- Wait for sms to receive information for your area



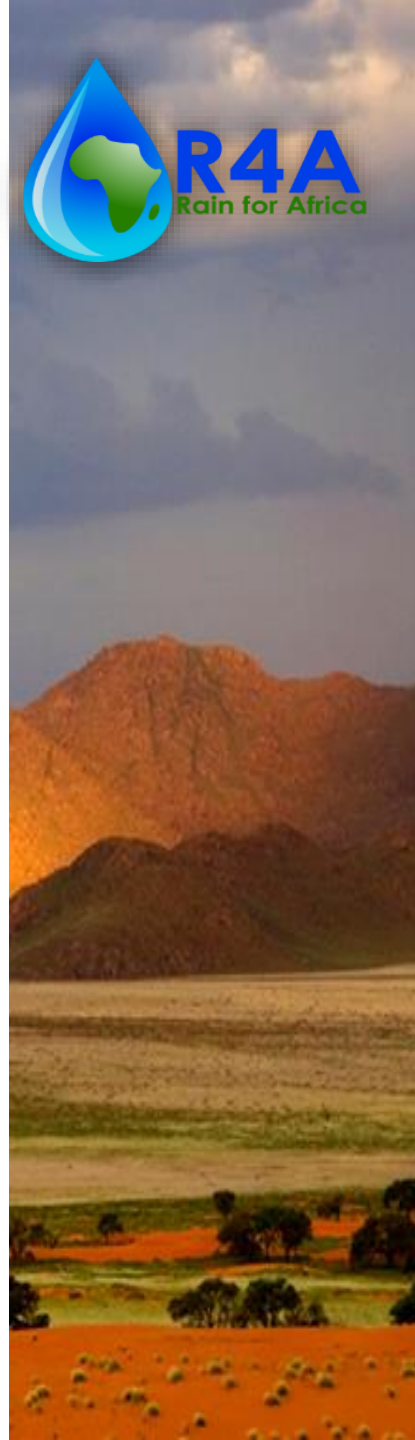
Example of output for info about spraying for weeds



Unique aspects of “AgriCloud” mobile App



- For both Smart and Simple phones
- In South African local languages
- Advice updated everyday
- Crop specific information
- Crowd-sourcing collection of weather observations
- Modular system to easily add new advisories





Every Raindrop counts

Download AgriCloud now -
use it to plant at the correct time

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