CSIR's Precision Agriculture Information System (PAIS)

Empowering South African Agriculture with 4IR Technologies to unlock smart agriculture

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CSIR
Touching lives through innovation

Outline

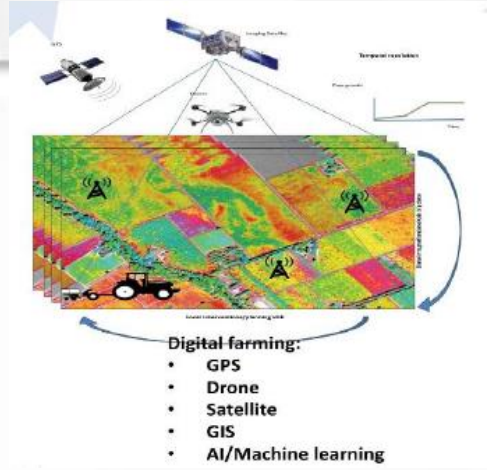
- CSIR's Precision Agriculture Information System (PAIS)
  - What is it?
  - How does it work?
  - How can it be used?
    - ✓ By individual farmers and
    - ✓ By extension services

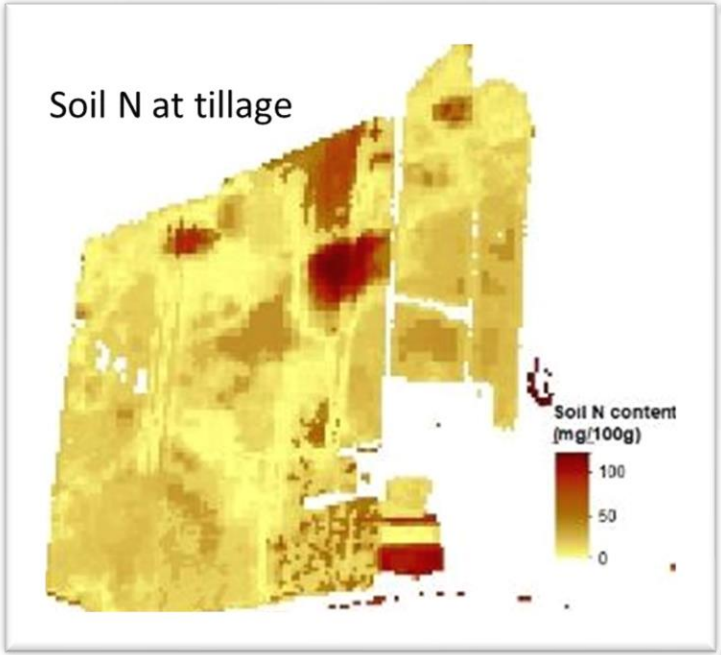
What is Precision Agriculture (PA)

- PA is about:
  - **Observing**
  - **Measuring and**
  - **Responding**

to within-field differences in
Soil and crop health in
Near real-time.

- The maps offer **<u>actionable insights</u>**





Example

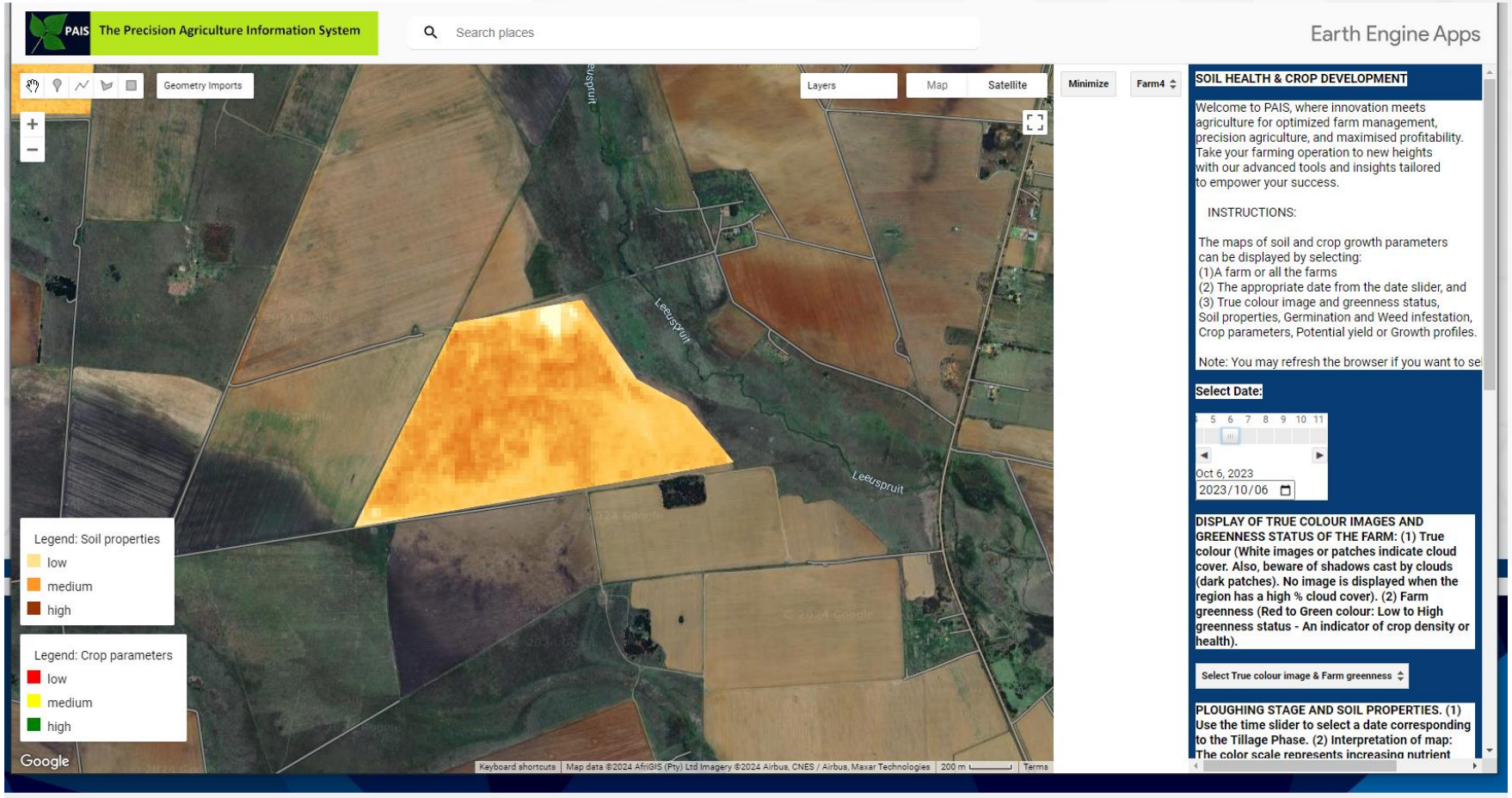
<u>Benefits of PA</u>

<u>Action</u>: Targeted application of N (at right time, place & amount)

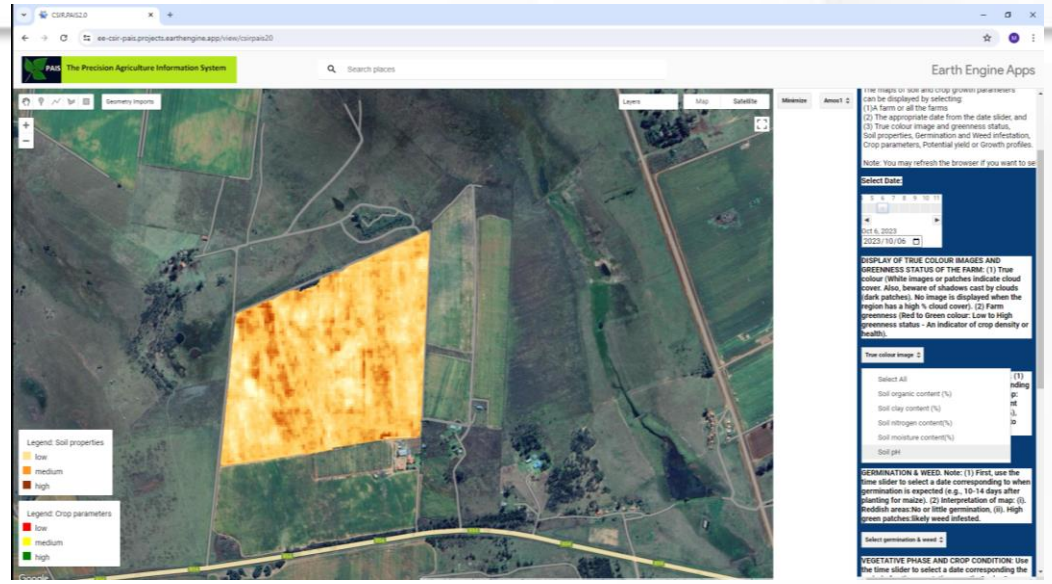
<u>Benefits</u>:
(1) Reduced use of N
(2) Reduced cost of production
(3) Higher profits to industry
(4) Lower pollution (benefit to society).

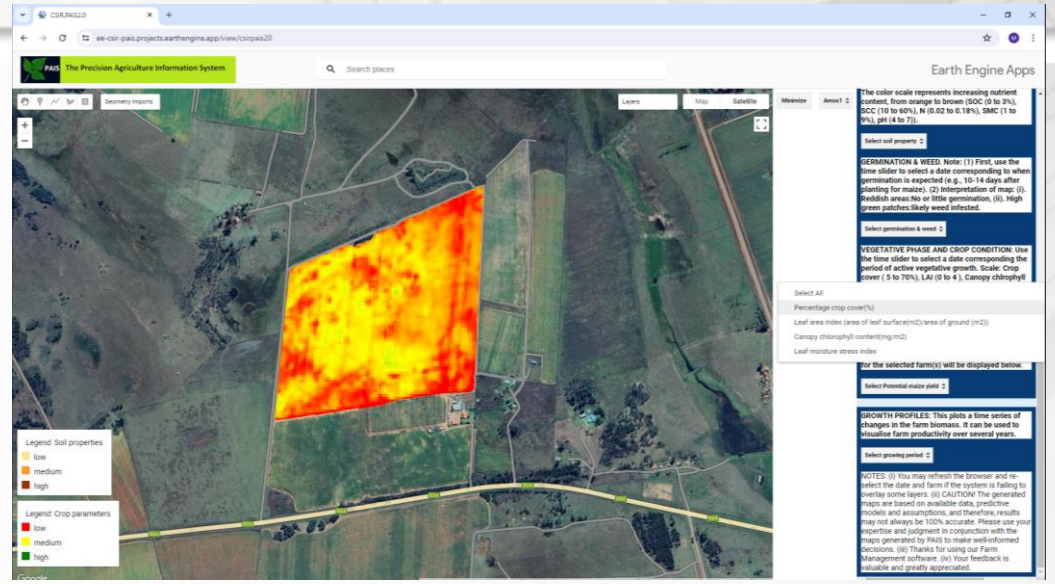
Precision Agriculture Information System (PAIS)

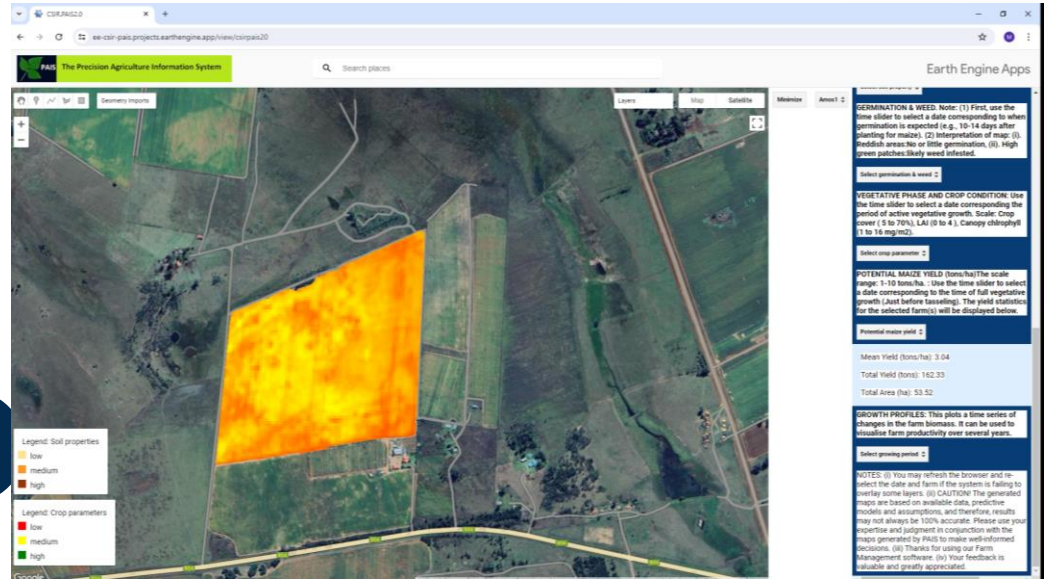
- PAIS is a farm management software that provides **farm-scale maps** on crop growth conditions, including **soil and canopy nutrient status, weed infestation and yield** predictions, all in **near real-time**.

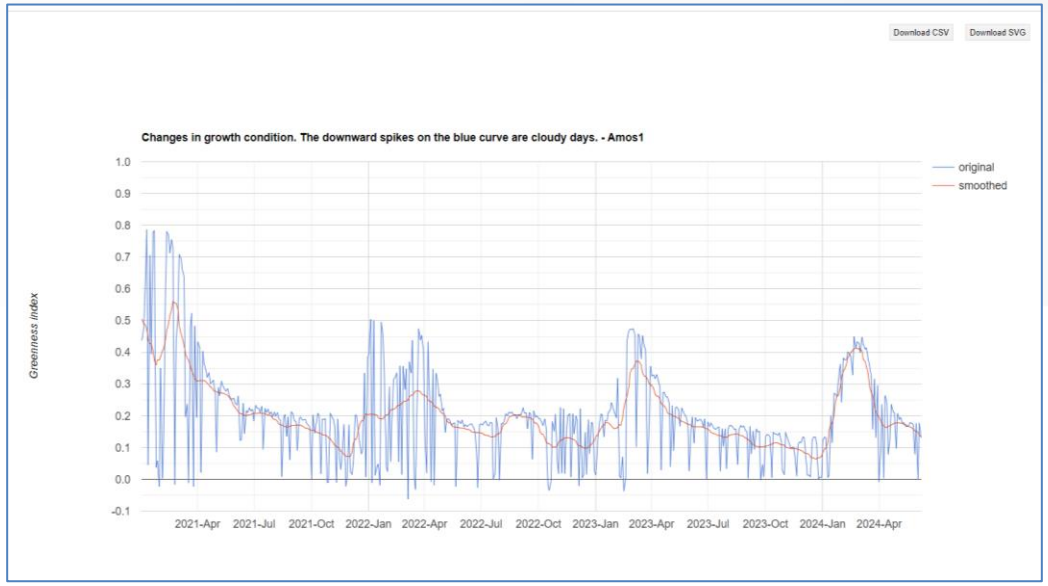


PAIS2.0 – Can be used by individual farmers

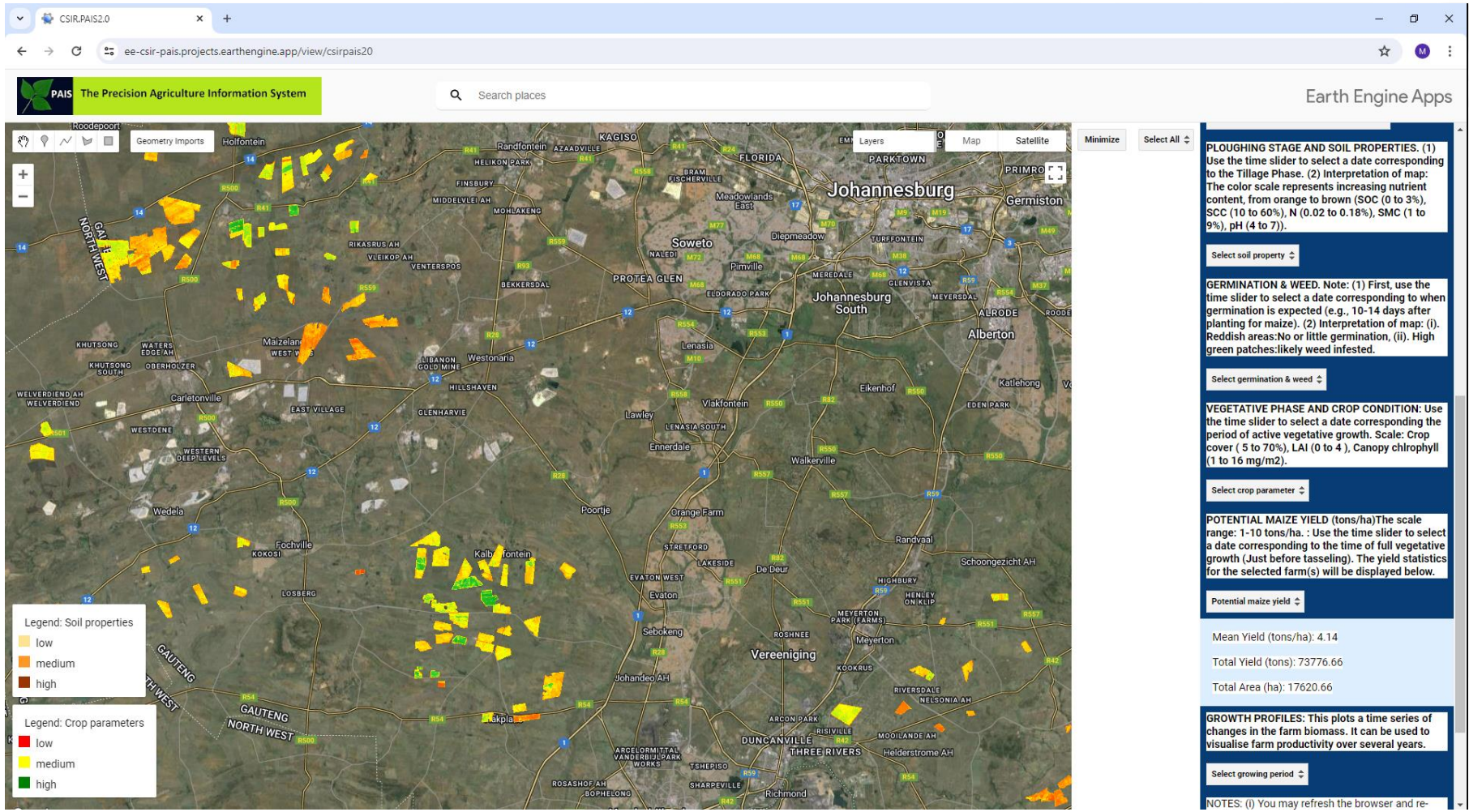








PAIS2.0 – Or by extension services to disseminate information, knowledge, and best practices to hundreds farmers in a region.



The Digital Agriculture Revolution

Isn't it time to leapfrog?