

Precision nitrogen fertilisation in potatoes

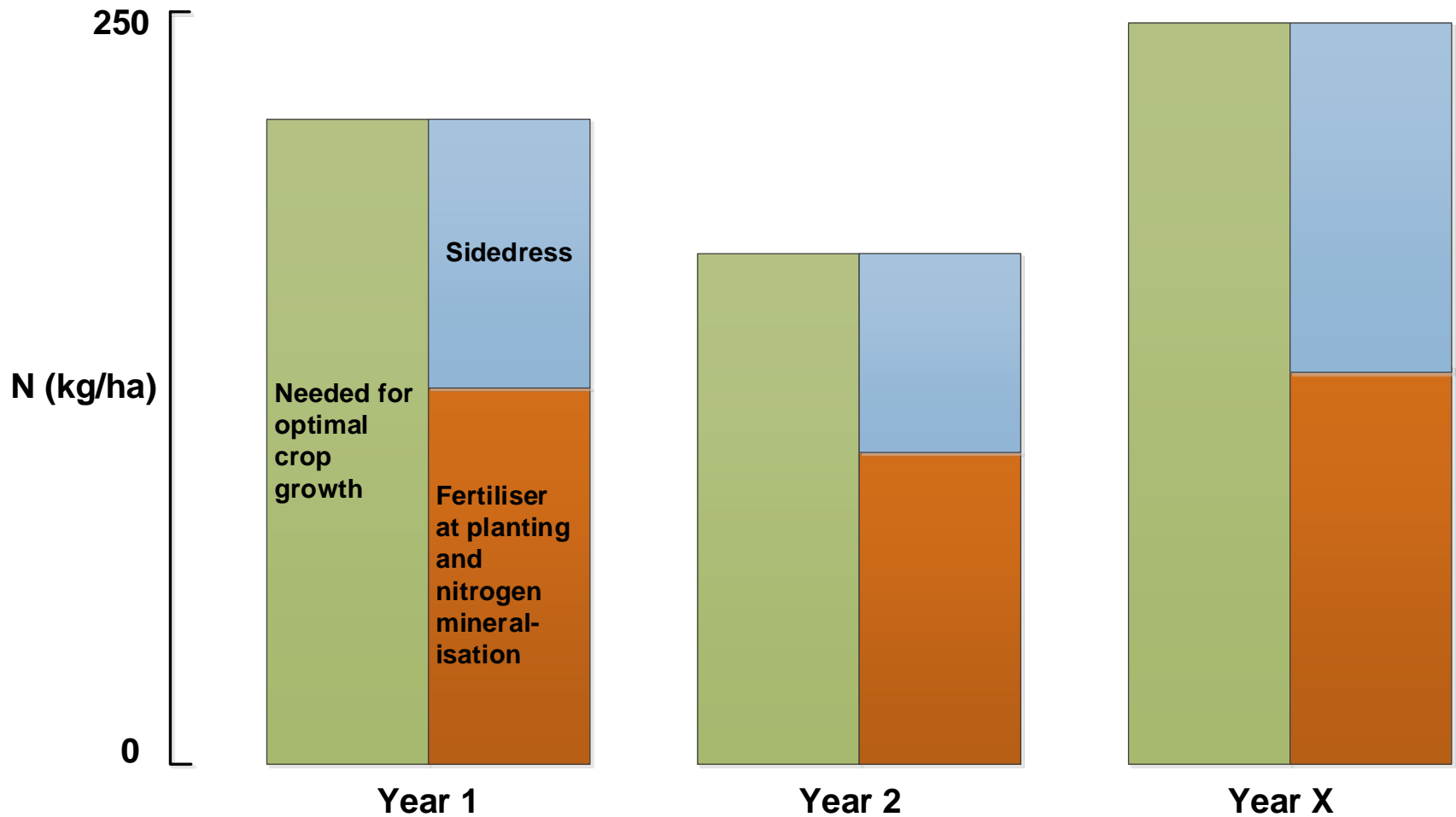


To cultivate potatoes sustainably, it is advisable to apply nitrogen in two sessions: first at planting and the second around the end of June.

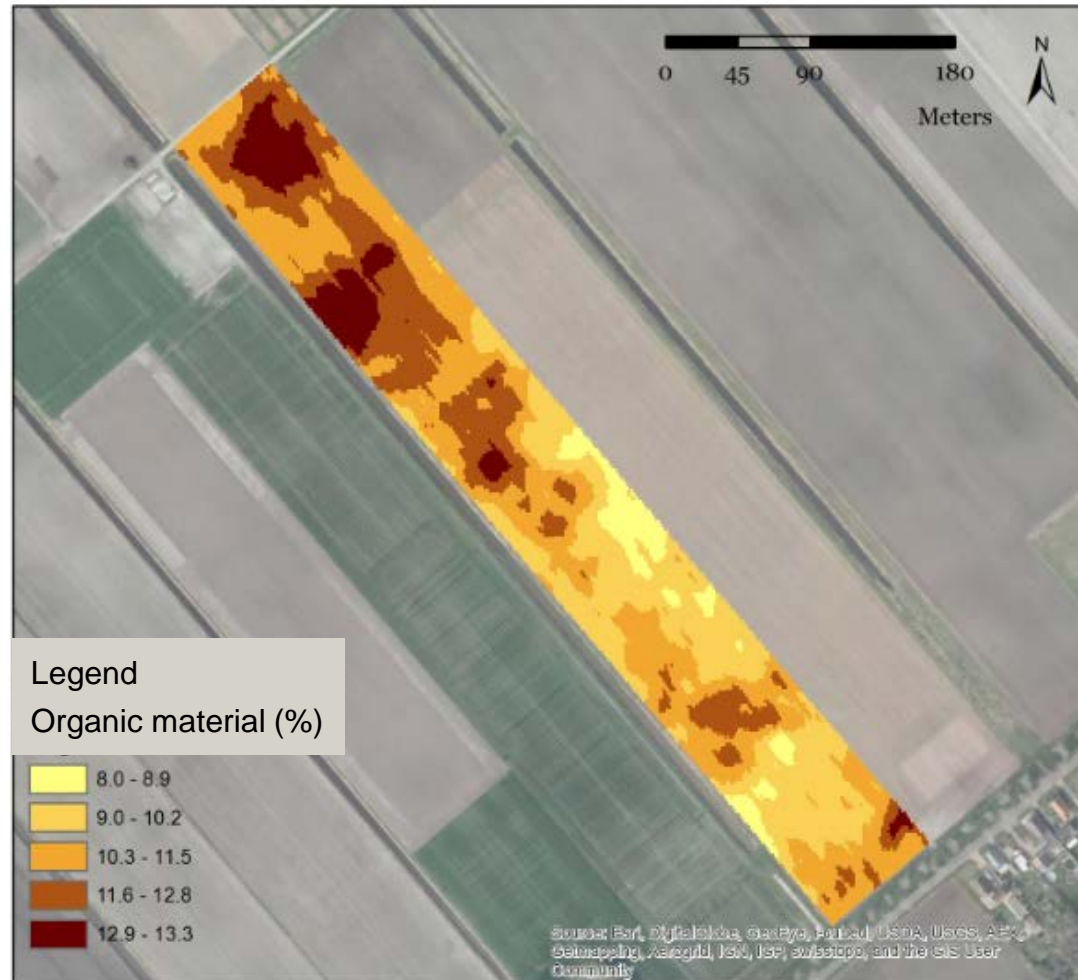
This allows farmers to address the differences in nitrogen demand, which varies from year to year, between fields and between places within a field.



The amount of nitrogen fertiliser needed (around 1 July) varies per year



The amount of artificial fertiliser required for fertilisation varies within a field depending, among other things, on the percentage of organic material in the soil.



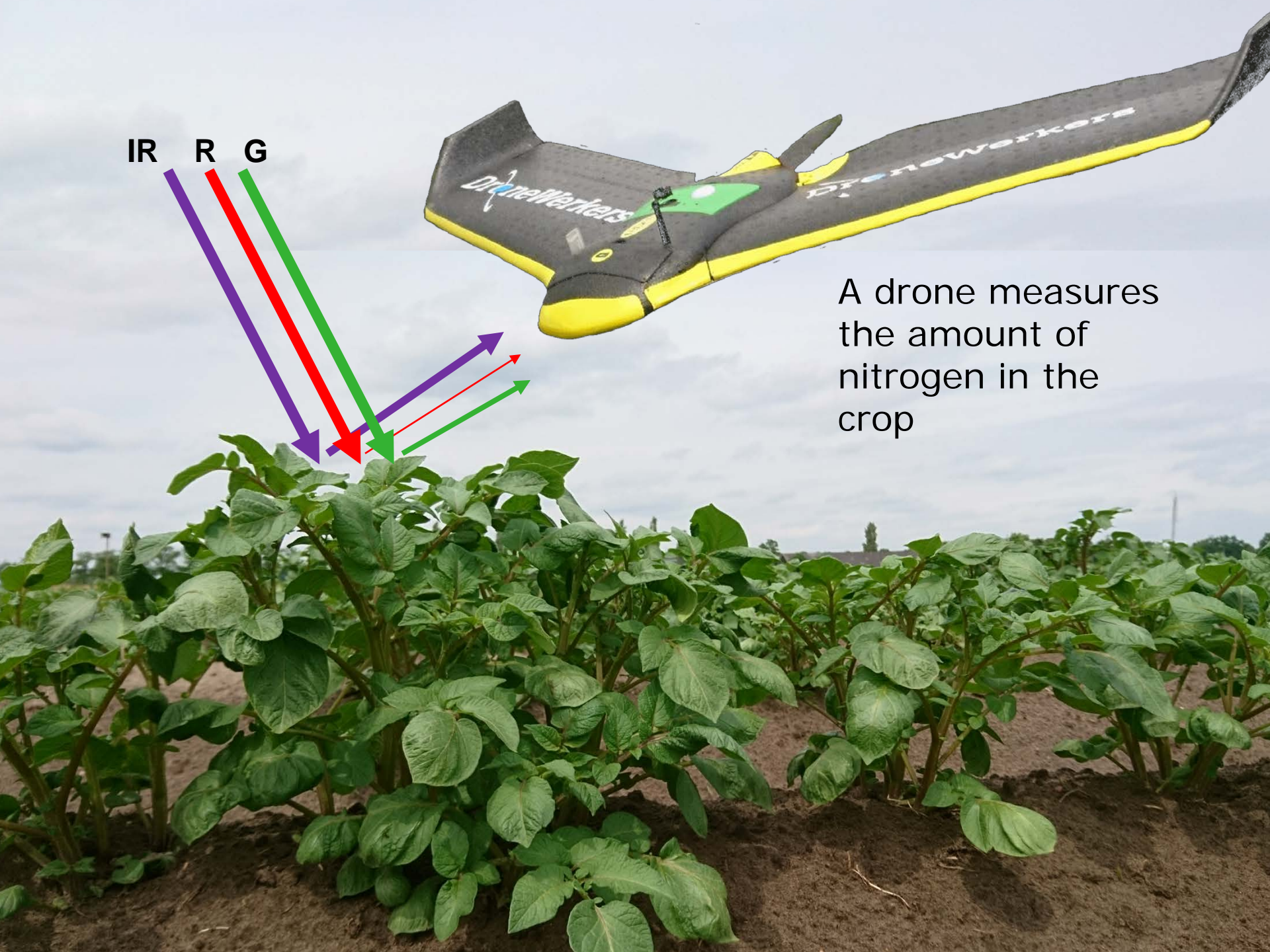


Too little N:

- **Yield loss**
- **Uneconomical**

Too much N:

- **Environmental damage**
- **Uneconomical**

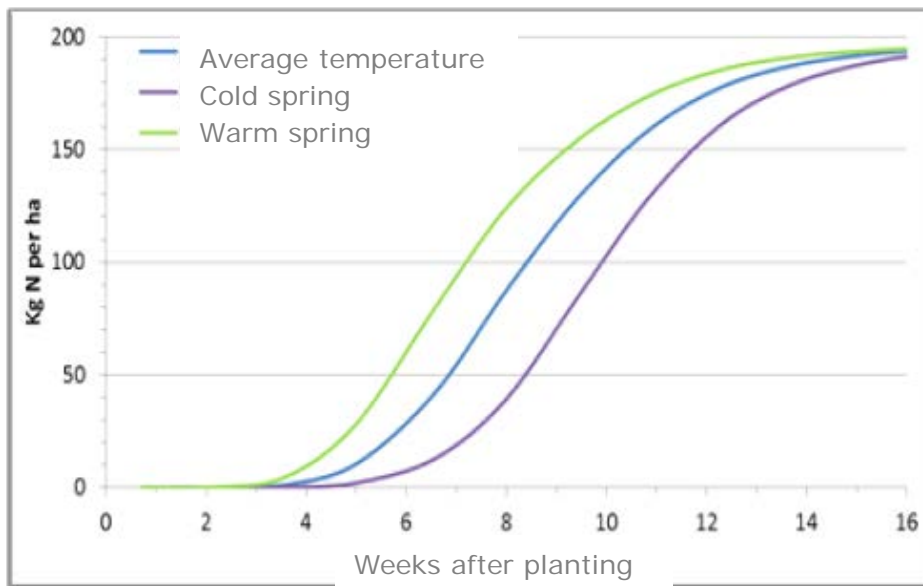


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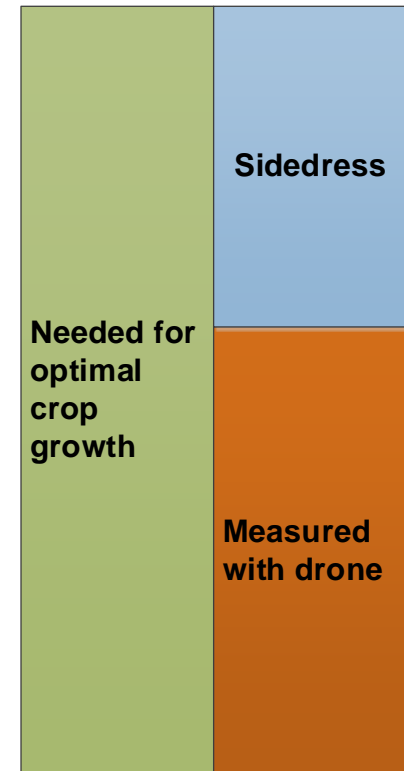
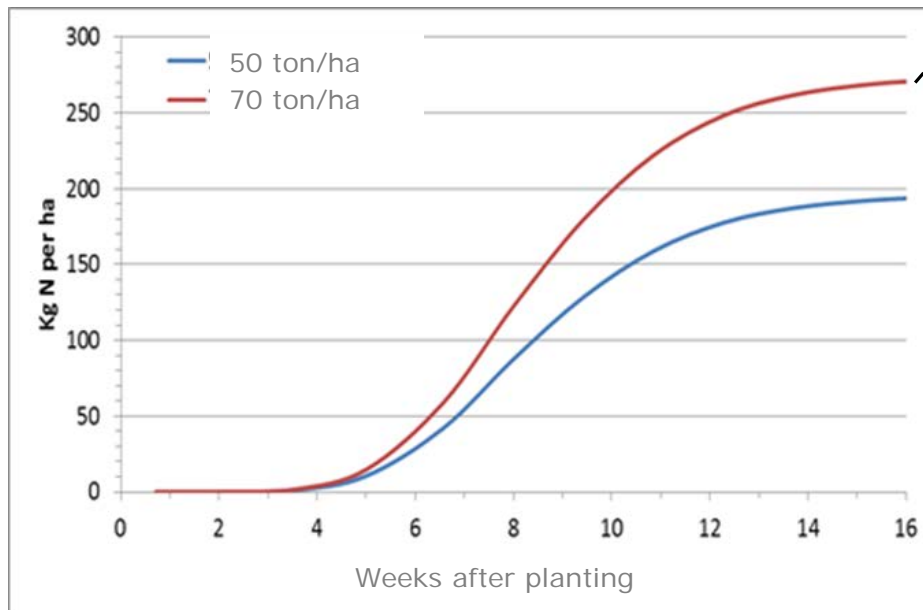
A drone measures
the amount of
nitrogen in the
crop

The drone image shows that the uptake of N in varies significantly within the field.

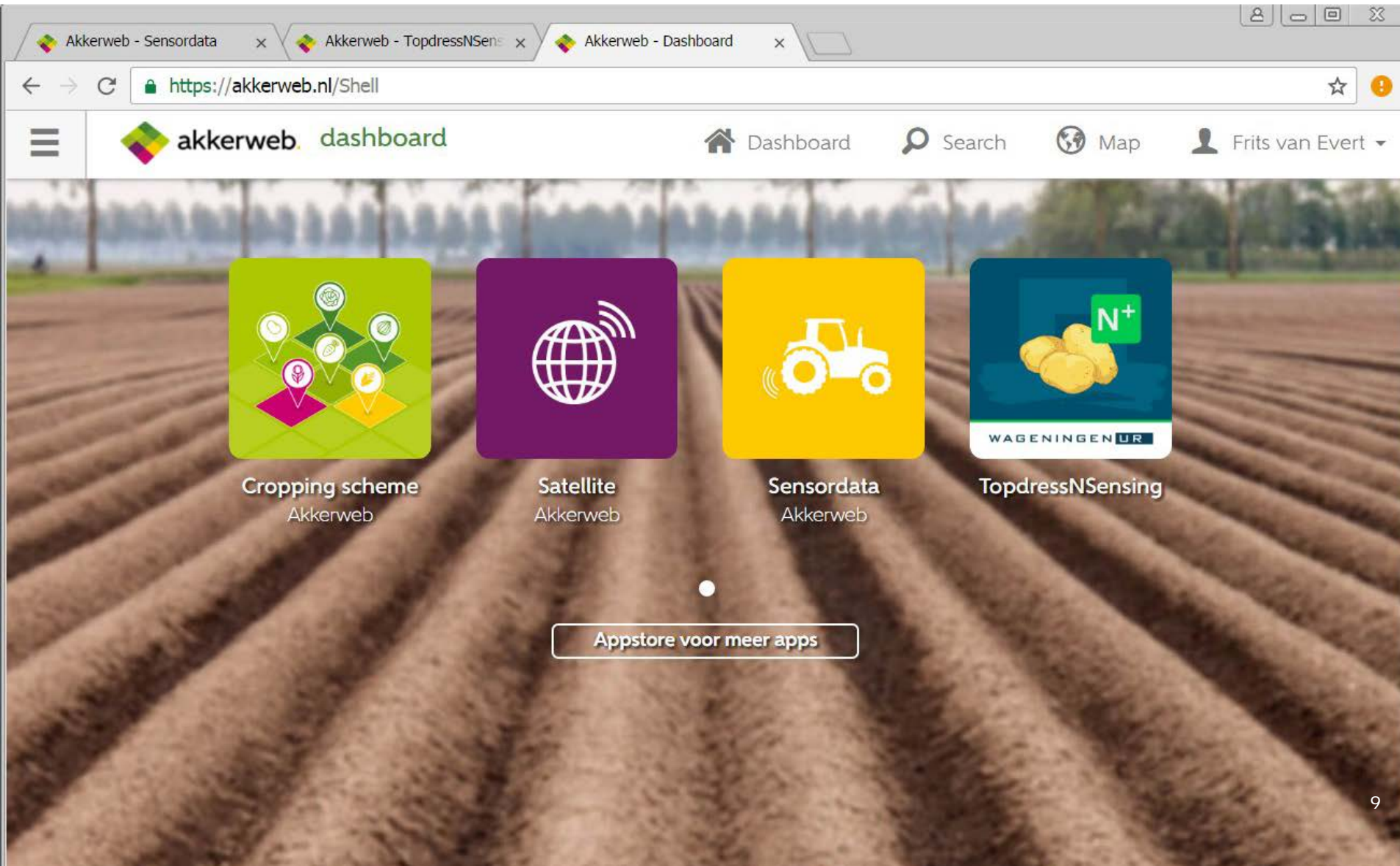




WUR computer models predict crop growth and the required nitrogen uptake for each field



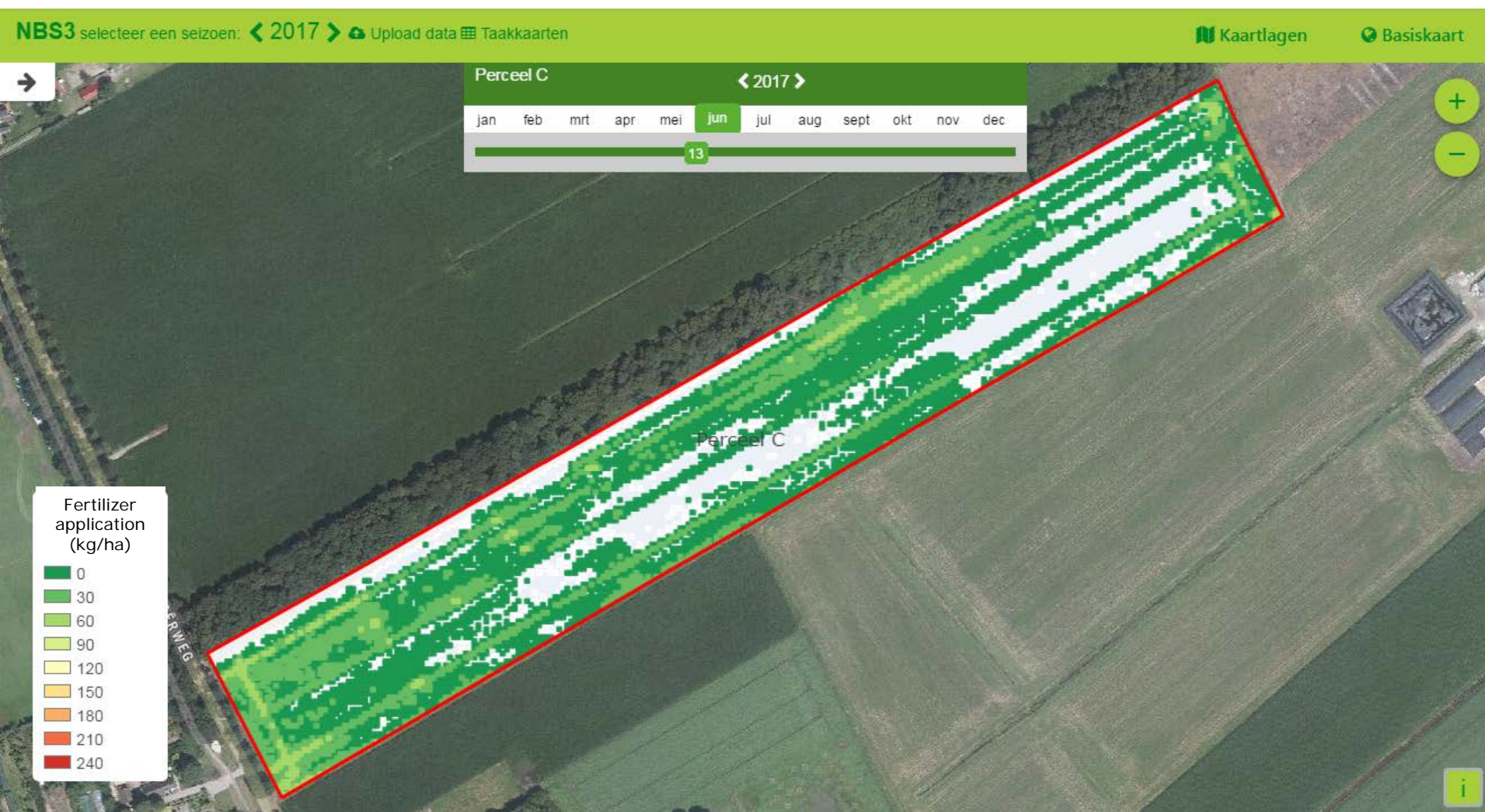
Akkerweb provides potato farmers with fertilisation advice based on a combination of drone images and the results of the WUR computer models.



Akkerweb provides a map with nitrogen fertilisation advice...



... and Akkerweb makes a application map for the on-board computer of the tractor which controls the fertiliser spreader.



“With drones I can register variation and then take site-specific action. In that way I can realize a more homogeneous and sustainable crop. I am looking forward to see the effect on profitability.”

Dirk Jan Beuling, potato grower in 1^e Exloërmond

More information?



Aaldrik Venhuizen

a.venhuizen@agrifirm.com

Tel. +31 6 22 97 80 77



Frits van Evert

frits.vanevert@wur.nl

Tel. +31 317 48 05 73

See also:

<http://precisielandbouw.eu/pl-2-0/integratie?layout=edit&id=152>



Ministerie van Economische Zaken

This work was carried out in the framework of the PPS 'Towards precision agriculture 2.0', and made possible by financial support from Agrifirm and Topsector Agri & Food. The project involved cooperation with drone operators and growers from the Value Network of the Province of Limburg: Better use of nitrogen via 'Aardappelsensing App'.