

Improving establishment and in-field variation with imagery-based seed plans

Overview

George Barber runs a mixed farming enterprise split over two farms in Northumberland with variable soils ranging from heavy clay loams to sandy loams, sometimes in the same field. He farms mainly winter drilled crops including wheat, winter barley, oilseed rape and winter oats, with spring barley, peas and grass included as part of their rotation.

George's interest in variable rate seed planning grew after his Agrii agronomist Andrew Wallace highlighted visible variation both in the satellite imagery displayed in the Contour platform, as well as whilst crop walking with George.

Advanced plan

RHIZA's 'Advanced' plan provides access to planning for two inputs, with seed planning and nutrient planning (including a choice of N, P&K or Lime) helping to maximise the benefits that users can receive.

The 'Advanced' plan also includes all the 'Base' plan features:

- **Z** Satellite imagery
- Z Pest and disease forecasting
- Z Soil data
- Z Weather data
- Z Crop growth models
- ☑ Mobile scouting app





Soil sampling has helped to improve the accuracy of George's seed maps and will continue to inform his decisions moving forwards.



For more information please contact your local account manager.

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Results

The imagery showed a visibly increased and even establishment in the crop after George's variable seed rate application. Although combine yield data was not collected, yields had noticeably increased on last year and the crop was more even when combining.

- Z 1st Wheats average 10.6t/ha
- Z 2nd Wheats average 8.6t/ha
- ✓ Winter Barley average 10t/ha

Conclusion and next steps

Establishing any crop efficiently has a huge impact on yield. Rather than relying on the elasticity of the plants to 'fill in' the poor areas, using variable seed allows the grower to establish the best possible plant population going into the winter. After seeing the improvement in his crops George sought to further his knowledge of his soils by using an EC scanner to map the fields. This was followed by soil sampling including laser texture analysis. This data along with plant and tiller counts from the variably drilled crops in the first season were used to further improve the seed maps going forward.

Variation within the field has been identified through scanning and this has been backed up by soil sampling to ground-truth the data. Sandy loam will require a much lower seed rate to achieve the optimum plant population than a clay loam will - this variation can be accounted for with seed rate maps.

George plans to continue to utilise the RHIZA platform to progress his business. He started with variable seed plans and is now moving onto variable Phosphate and potash applications, with variable lime planned after harvest. He has also invested in a new combine with a yield meter to help further identify the lower yielding areas of the farm. Along with his agronomist and RHIZA account manager, George has been out in the field this spring gathering more data for the coming drilling season, which will continue to improve his seeds plans.