



agrovista  
precision

# PRECISION FARMING GUIDE



# PRECISION FARMING SERVICES

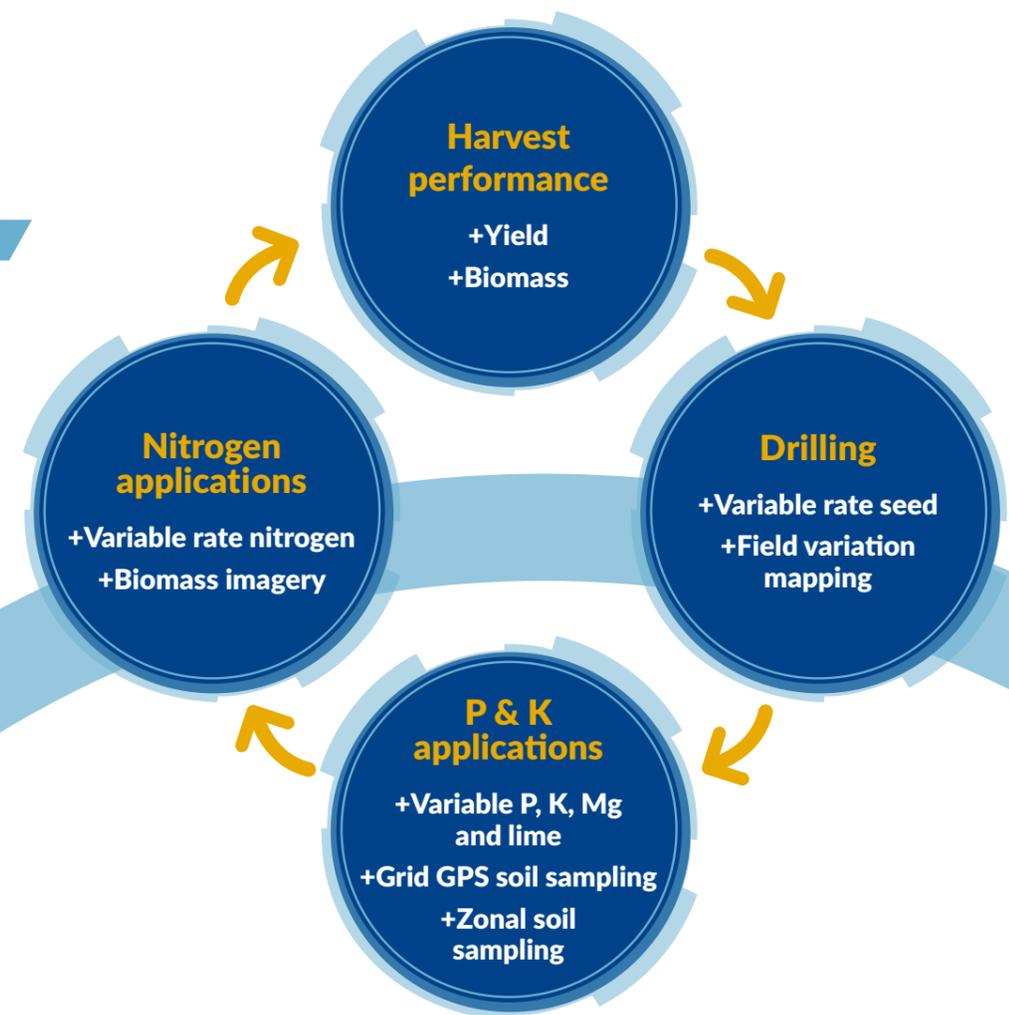
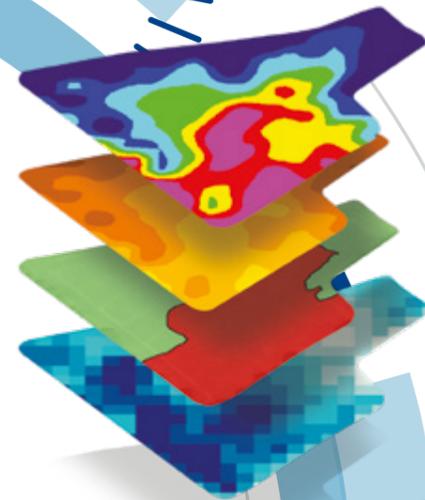
Agrovista Precision is about helping you make the right decisions for you and your farm.

We want to keep things simple by supporting you to make informed precision farming decisions with clear data backed up by expert agronomist knowledge.

Despite all the information out there, we believe this doesn't need to be an overly complex or expensive addition to your farming practices. Most importantly, it's about working together to ensure you achieve the best margin possible for each field.

## Contents

- 3 Introduction
- 4 Insight - Your farm data platform
- 6 Yield map cleansing
- 8 GPS soil sampling for nutrients
- 10 Zone mapping
- 12 Satellite imagery and VR nitrogen
- 14 Field variation mapping
- 16 PCN sampling
- 18 Other services



Maximise field performance:

● Soil ● Data layers ● Yield ● Nutrition

# INSIGHT - YOUR FARM DATA PLATFORM

User-friendly dashboard providing updates and news for your farm

## Precision mapping

- Whole farm view of all your data
- Navigate to field option to help contractors find your fields
- Improved zoning functionality
- View data for any precision services carried out on your farm
- Add notes to your fields
- Manually draw zones for variable applications
- Measure areas and lengths and store them by category
- Download your application data

## Delivery notifications

- Track delivery status and delivery time slot
- View which products are on the delivery
- See where it has been delivered

## Report store

- Contains all reports associated with your business: Nutrient, soil and manure management plans, leaf tissue analysis, soil and manure analysis, precision reports
- Links directly with Yara Lancrop to automatically create lab reports
- Includes tags to assist when looking for audit data e.g. Red Tractor or SFI audit filter

## Weather app

- View forecasts
- Weather station data
- Disease risks

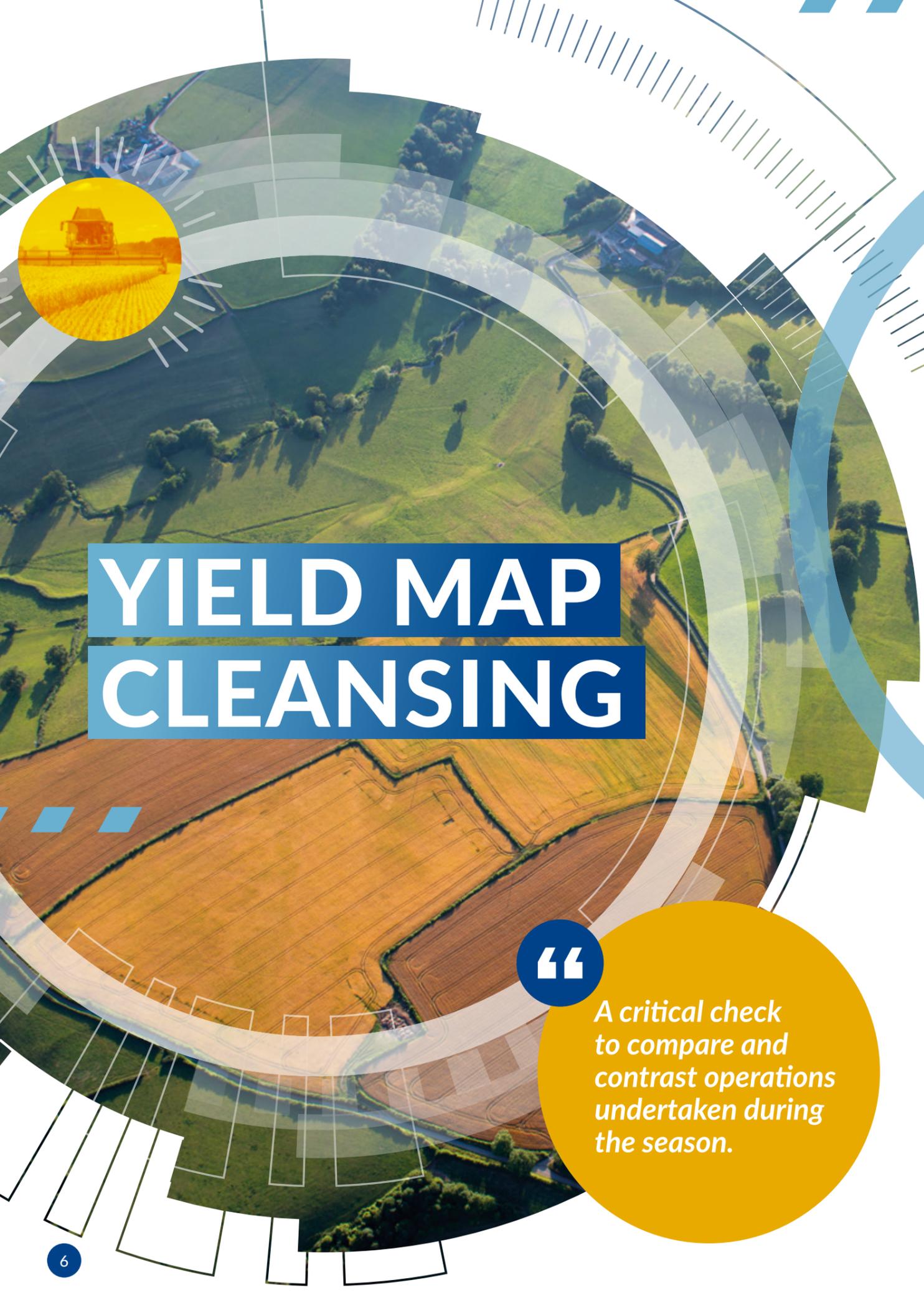
## Management reports

- The first step to automated management reports
- Pulls data from your agronomy software giving you the ability to edit your data
- Enables accurate and prompt Rural Consultancy reports generated from your data

## Additional features

- Gross margin calculator
- Seed rate calculator
- Customisable bookmarks
- 'My organisation' - Share your data within your business





# YIELD MAP CLEANSING



*A critical check to compare and contrast operations undertaken during the season.*

## What is it

Yield map cleansing can provide a critical check to compare and contrast operations undertaken during the season, highlighting those approaches that have worked and pinpointing others that need further refinement.

Identifying this variation is key to understanding what is happening in the field. Yield map cleansing enables us to remove header lifts and combine turns and also take into account part swaths.

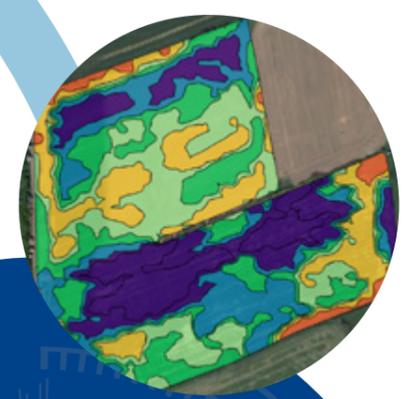
## Service use

- Overall crop view
- Basic variable rate seed
- Offtake variable rate P and K
- Problem solving

## Benefits

- Better understand why areas are performing better or worse. Correct these issues for an increase in yield
- Action variable rate seed from previous performance to even up the crop
- Ensure indices do not drop

Multiple years of yield data, which can be normalised (make all maps show the same figure) and layered together to identify trends and potential actions. For example, if an area always performs badly should it be put into an environmental scheme to make money rather than lose it? For most accurate results a minimum of three years of data should be used.



## What is involved

- 1 Export your yield data from the combine
- 2 Send to your agronomist or precision specialist
- 3 Your precision specialist will process the data and send an overview of your fields back to you
- 4 A discussion can then take place and your precision specialist will advise you on next steps

This data can be used to create basic seed maps, variable rate P and K based on offtake and to target soil sampling to understand variances better. Yield data can also be used to create profitability maps. All we need is the input costs of the land we are analysing.

# GPS SOIL SAMPLING FOR NUTRIENTS

## We can provide GPS soil sampling for nutrients and pH

There are two methods of precision soil sampling – **grid mapping** (randomly selected points, normally 1 per hectare), **zone mapping** (samples taken from specific field variation zones).

### Grid mapping

#### What is it

Grid mapping is where precision farming started in the UK. It is a basic yet very important part of precision farming.

Grid mapping is designed to bring and maintain your nutrient levels to a given index, utilising variable rate technology on your spreader.

#### Service use

- Variable rate P, K, Mg and pH
- Addition of other nutrients where applicable
- Soil health analysis can also be added

#### Benefits

- Highly accurate results
- Identifying areas which require less/more nutrients

### What is involved

- 1 Map the boundary
- 2 Set sampling points, generally 1ha, ensuring points are not too close to areas such as boundaries, pits and trees
- 3 The sampler is guided to each sample point to collect 16 sub-samples
- 4 The sampler is able to relocate sampling points due to factors that could lead to inaccurate readings, such as cattle feeders, muck heaps or wet holes
- 5 Samples are logged and sent to the laboratory for analysis

A year's worth of data collected by Agrovista showed that the following percentage of land required no fertiliser.

P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Mg	Lime
25%	18%	86%	82%



Once nutrient levels are measured your precision specialist will tailor variable rate prescriptions to start raising and maintain your indices.

Four years of application data is included in this service.

**Cost reduction**  
**14.8%**  
**Saving of**  
**£18.56/ha/year**  
**for four years**

#### Before and after Agrovista Precision carried out GPS grid mapping:

##### Before

A farmer traditionally applies 300kg/ha of 0-20-30 across three fields – 20.81ha.  
20.81ha @ 300kg/ha = 6.24t @ £420/t  
**Total Cost = £2620.80**

##### After

Farm Requirements: 1.7t of TSP @ £510/t = £867  
3.85t of MOP @ £355/t = £1366.75  
Total fertiliser cost - £2233.75  
**Total fertiliser saving of £386.25/year**

# ZONE MAPPING

## What is it?

Zone mapping utilises either soil variation or field variation maps.

Predetermined soil sampling points are set within soil type or productivity zones.

Basing soil sampling on variation maps is not only a more effective use of the variation maps but also adds greater accuracy to your nutrition variation.

Some soil types have the ability to hold certain nutrients better than others and a site-specific point within a zone will show this.

However, variation can also occur within a particular zone, therefore overlaying 1ha grids over the variation maps is the most accurate way to determine nutrient levels. Each sample will still consist of a minimum of 16 cores.

## Service use

- Variable rate P, K, Mg and pH
- Zone scans not included

## Benefits

- Highly accurate results
- Identifying areas which require less/more nutrients

## What is involved

- 1 Utilise previous soil type scans or field productivity scans to accurately place soil sample point
- 2 The sampler is guided to each sample point to collect 16 sub-samples
- 3 The sampler is able to relocate sampling points due to factors that could lead to inaccurate readings, such as cattle feeders, muck heaps or wet holes
- 4 Samples are logged and sent to the laboratory for analysis

## Information required for application data

- 1 Type of analysis – standard is S1 (P, K, Mg and pH). Further nutrients can be added for an additional fee. Two popular additions are Ca and organic matter
- 2 Cropping – to create a fertiliser recommendation the precision team require cropping, yield, target pH, muck information and straw policy
- 3 Once these reports have been created it is then time for a discussion with the grower and agronomist

The cropping form should be updated yearly for new recommendations. Four years of recommendations are supplied with this service.

Application maps can be made for all major manufacturers' equipment. Your precision specialist can advise on file type and format.

This service can also be loaded onto the Agrovista portal 'Insight'. For a greater depth of knowledge, it is suggested that a broad spectrum Solvita analysis (a measure of soil biology) is carried out for the whole field.

## Standard services include

- P, K, Mg and pH maps
- Four years of recommendations
- Data interpretation
- Application files
- Soil variation scans NOT included

Barn Ground									Sample Date: 25/09/2025				
Spr barley (21.75 Ha)									Yield: 8.00 t/Ha			Straw baled	
Organic Material Applied: None													
	Low		High		Avg		Target	Input	Rate (kg/ha)			Total req	
	mg/l	index	mg/l	index	mg/l	index			Low	High	Avg		
P	14.0	1+	40.0	3+	21.4	2	2	TSP	0	187	138	2.98t	
K	186.0	2	335.0	3+	253.0	3-	2	MOP	0	108	43	0.92t	
Mg	66.0	2-	174.0	3+	98.5	2+	1	Kieserite	0	0	0	0.00t	
pH	5.4		8.1		7.0		6.6	Lime	0	8000	2093	45.7t	



The first field resulted in a saving on P and K of £18.50/ha, a figure that Stuart says is typical across the farm's light soils.

"I thought the equipment had stopped working in one field - I had to travel three-quarters the way around the headland before it started spreading.

"It just shows how much we have been overapplying. We've used a total of 455kg of TSP and 160kg of MOP on 38ha, compared with the 1500kg of compound we used on the same area last season, a saving of £700.

That's significant, and at current prices would be considerably higher. The service has already paid for itself - just think what a bigger unit could save."

Stuart Dickin, P & J Dickin & Son

**Saving on P and K of £18.50 /ha**

# SATELLITE IMAGERY AND VR NITROGEN



## What is it

Variable rate nitrogen is a simple process. You enter the average rate you wish to apply to the field and enter the percentage variation from that figure you would like to use.

Our partner provides figures on the variability of your crop.

Variable rate nitrogen application is not necessarily to save money, but more to refine fertiliser application according to crop need, in order to achieve optimal increase in yields.

## Service use

Biomass imagery is used to produce data on:

- Variable rate nitrogen applications
- Variable rate plant growth regulator (PGR) applications
- Intelligent crop walking
- Smart tissue analysis

## Benefits

- Yield increases of 3-5% using variable rate nitrogen
- Variable rate nitrogen applications also help to reduce lodging risk

## Intelligent crop walking

View and compare NDVI images to see how crops are performing throughout the season. Images can be viewed on an app.



*Variable rate nitrogen applications also help to reduce lodging risk*

## What is involved

- 1 Provide fields and locations for which you require maps
- 2 Let us know what fertiliser you are using
- 3 Let us know the preferred application rate
- 4 We'll do the rest and provide you with all the data you need

# FIELD VARIATION MAPPING



Drilling with variable rate seed at an appropriate seed rate shows on average a 4% yield increase.

**Graeme Barrett,  
Agrovista UK**

## What is it

Field variation mapping is a new way of finding in-field variation, using multiple layers from two different satellites, which offers some very useful information at a competitive cost.

Field variation mapping looks at soil moisture index, soil properties, NDVI of a crop's performance and canopy cover to create one field variation map.

Gone are the days of comparing maps side by side, thanks to our map stacking ability.

The main advantage of using satellite data above an infield sensor is that we can get the data regardless of weather or crop. We can look back over nine years to get the data you need for your field.

## Service use

Variable rate seed

## Benefits

- P and K offtake more uniform
- More consistent harvesting speed
- Soil zones for variable rate P and K  
*Soil sampling not included.  
Please see page 8 for more details*
- Problem areas to place broad-spectrum Solvita samples

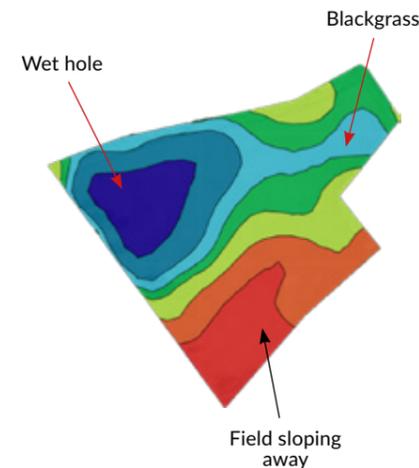
Obtaining a soil sample from high and low productive areas will provide an accurate indication of soil structure across the field (additional cost). In the example the red areas of the field are sandy clay loam with lower potassium levels and lower pH and the blue areas are clay loam with lower phosphate levels.

This data can be used to compare fields across the farm rather than just variation within the field (additional cost).

Seed rates in the first year are varied in a conservative manner and the most accurate way of providing the best maps is to count establishment percentages in year one. Zones will not change but tweaking rates is very important.

## What is involved

- 1 Send the precision team your field locations. We request the data from the satellites and provide you with a variation map
- 2 Visual notes from the agronomist and growers
- 3 This combination can provide key information regarding zone performance



Field sloping away



Blackgrass



# PCN SAMPLING

“  
**Correct sampling is vital to successfully reduce the risk of potato cyst nematode**

## What is it

Potato cyst nematode is one of the most damaging pests of potato crops. Correct sampling is vital to successfully assess the population spread and reduce the risk of damage.

PCN sampling is carried out on a 1 hectare grid map, analysing 200g samples. This is the optimum technique, in line with AHDB guidance. Any other approach is not deemed sufficiently accurate.

## Standard service

- Cyst and egg count including total, dead and full
- 49 cores/ha
- 200g soil analysed

## Benefits

- Speciation
- Free-living nematode
- Tobacco rattle virus
- Nutrient analysis

This service is used mainly for PCN sampling and can also be used for one-off applications of nematicide. Analysis for free-living nematode and tobacco rattle virus can be added for a more detailed view of your fields.

Nutrient analysis can also be carried out and variable rate applications made.

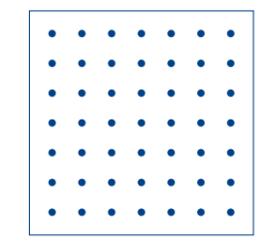
## What is involved

- 1 Provide fields to your agronomist or precision specialist
- 2 Let your precision specialist know which way you plan to plant fields
- 3 Ensure we know what analysis you require. We can advise you on what we think is best
- 4 Your precision specialist will plot the sampling grids for our soil samplers
- 5 We will provide you a detailed report so you can clearly see any issues

Chapmans Wood (10.65Ha)		Samples: 9				Sample Date: 10/11/2025	
	Min		Avg		Max		
	Count	Severity	Count	Severity	Count	Severity	
PCN Eggs/g	3.00	Low	8.56	Low	13.00	Mod	
Total Cysts/100g	5.00	Low	14.22	Mod	23.00	Mod	
Dead Cysts/100g	2.00	N/A	5.56	N/A	12.00	N/A	
Half Full Cysts/100g	0.00	N/A	1.89	N/A	4.00	N/A	
Full Cysts/100g	3.00	N/A	6.78	N/A	10.00	N/A	



Field	Part Of Field	Lab Ref	Total Cysts Soil/100g Soil	Dead Cysts	Half Full Cysts	Full Cysts	Eggs g Soil
Chapmans Wood	1	166/96	11	5	1	5	7
Chapmans Wood	2	167/96	10	4	0	6	6
Chapmans Wood	3	168/96	15	3	2	10	11
Chapmans Wood	4	169/96	5	2	0	3	3
Chapmans Wood	5	170/96	16	6	4	6	8



Standard 49 Cores/ha



# OTHER SERVICES

## Carbon mapping

Accurately measuring carbon in field is the only true way to learn how carbon can benefit you.

We offer high resolution carbon mapping whereby intensive detail will prove how your farming practices benefit the environment as well as pushing your field to full potential.

- Carbon content on 1ha grids
- Deep core carbon stock measurements

## Drone imagery

- Plant health – determine crop variation, identify zones, use variable rate applications from biomass, map blackgrass, apply variable rate glyphosate, crop establishment
- Plant count – establishment, crop variation, count comparison, seed viability
- Plant size – yield prediction, crop variation, optimise harvesting, ability to forward sell crop more accurately
- Data Analytics – compare treatments
- Farm aerial imagery
- Weed mapping
- Blossom and vigour mapping in orchards

## Deep core soil mineral nitrogen sampling

- Sampled at three depths: 0-30cm, 30-60cm and 60-90cm

## Additional services

- Slope mapping
- Soil type mapping in orchards



Real-time imagery of your field



# Work with the weather, grow with confidence



## 4G REMOTE WEATHER AND SOIL MOISTURE STATIONS

- Top-quality, long-lasting weather stations that deliver accurate data year after year helping you make smarter decisions and farm more effectively by working with the weather, not against it
- SIM card-enabled - no Wi-Fi or power needed
- Reduce field visits
- Protect your crops - live alerts from sensors by e-mail, SMS, or phone call
- Benefit from AI-powered weather forecasts, disease predictions and irrigation insights for smarter IPM
- Backed up by expert advice and support from your local agronomist

Cost-effective options - contact us for a free demonstration

For more information, please contact your local agronomist  
[agrovista.co.uk/weather](http://agrovista.co.uk/weather)



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