

An aerial photograph of a combine harvester working in a field. The harvester is positioned in the center-right of the frame, moving from right to left. The field is marked with numerous parallel, curved tracks, indicating precision farming techniques. The overall color palette is a mix of light brown and tan, representing the soil and harvested crops.

Will Precision Farming Change The Face of UK Agriculture?

Jake Freestone
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2013 Nuffield Scholar



Precision Farming

Definition



Precision Farming

An aerial photograph of a combine harvester operating in a large agricultural field. The harvester is positioned in the center-right of the frame, moving from the upper right towards the lower left. The field is marked with numerous parallel, slightly curved tracks, indicating the path of the harvester's wheels. The ground is a light brown color, and the overall scene is captured from a high angle, showing the scale of the operation.

Definition

Benefits

Precision Farming

An aerial photograph of a large agricultural field. A combine harvester is visible in the center-right, moving across the field. The field is marked with numerous parallel, slightly curved tracks, indicating the path of the harvester. The overall color of the field is a light tan or beige, suggesting a dry or harvested state. The harvester is green and white, and it appears to be in the process of harvesting or spreading material. The tracks are closely spaced and follow a consistent pattern across the field, demonstrating precision farming techniques.

Definition

Benefits

Applications

Precision Farming

An aerial photograph of a combine harvester operating in a large agricultural field. The harvester is positioned in the center-right of the frame, moving from the upper right towards the lower left. The field is marked with numerous parallel, slightly curved tracks, indicating the path of the harvester's wheels. The ground is a light brown color, suggesting a dry or harvested state. The overall scene illustrates the concept of precision farming through the use of technology to optimize field operations.

Definition

Benefits

Applications

Case studies

Precision Farming

An aerial photograph of a combine harvester operating in a large agricultural field. The harvester is positioned in the center-right of the frame, moving from the upper right towards the lower left. The field is marked with numerous parallel, slightly curved tracks, indicating the path of the harvester as it works. The ground is a light brown color, and the overall scene is captured from a high angle, providing a clear view of the harvester's path and the layout of the field.

Definition

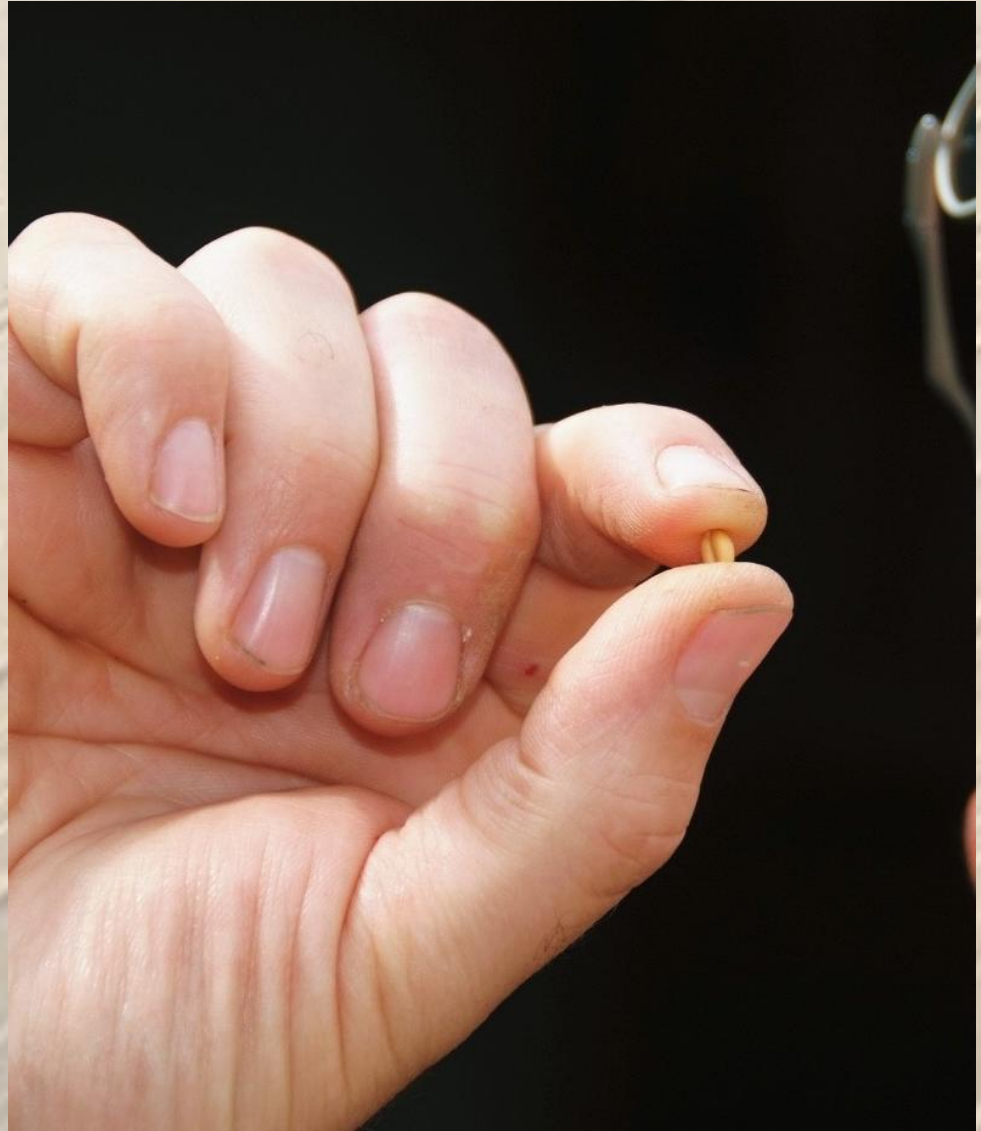
Benefits

Applications

Case studies

Next steps

Definition



Definition



Definition



Definition



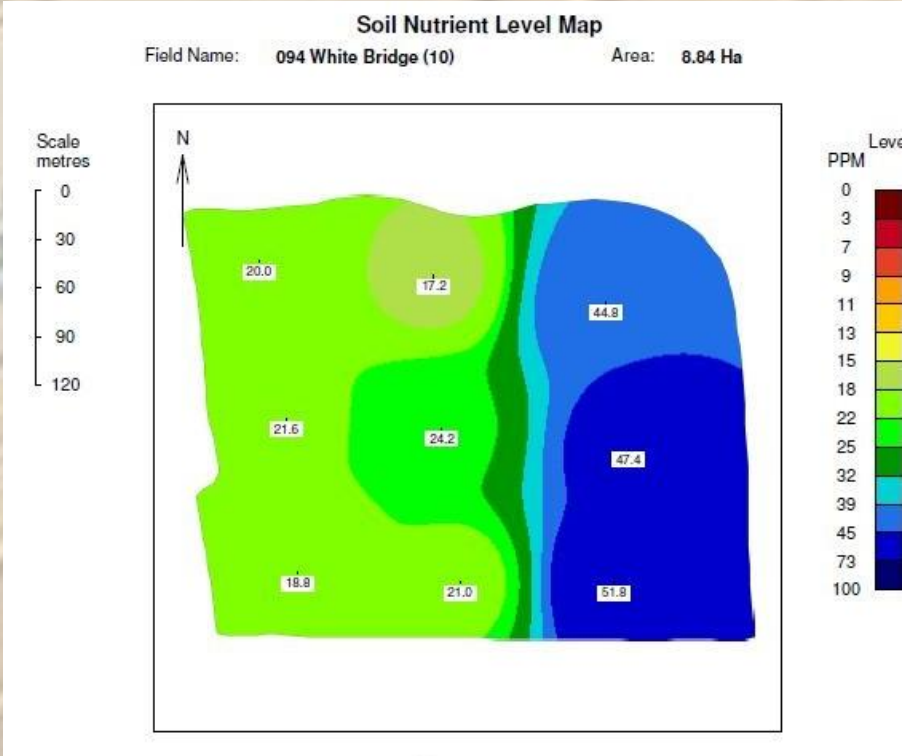
Precision Farming

Definition

Benefits



Benefits



Benefits



Benefits



Benefits



Precision Farming

An aerial photograph of a large agricultural field. A combine harvester is visible in the center-right, moving across the field. The field is marked with numerous parallel, slightly curved tracks, indicating the path of the harvester. The overall color of the field is a light tan or beige, suggesting a dry or harvested state. The text 'Precision Farming' is overlaid at the top center in a large, bold, black font.

Definition

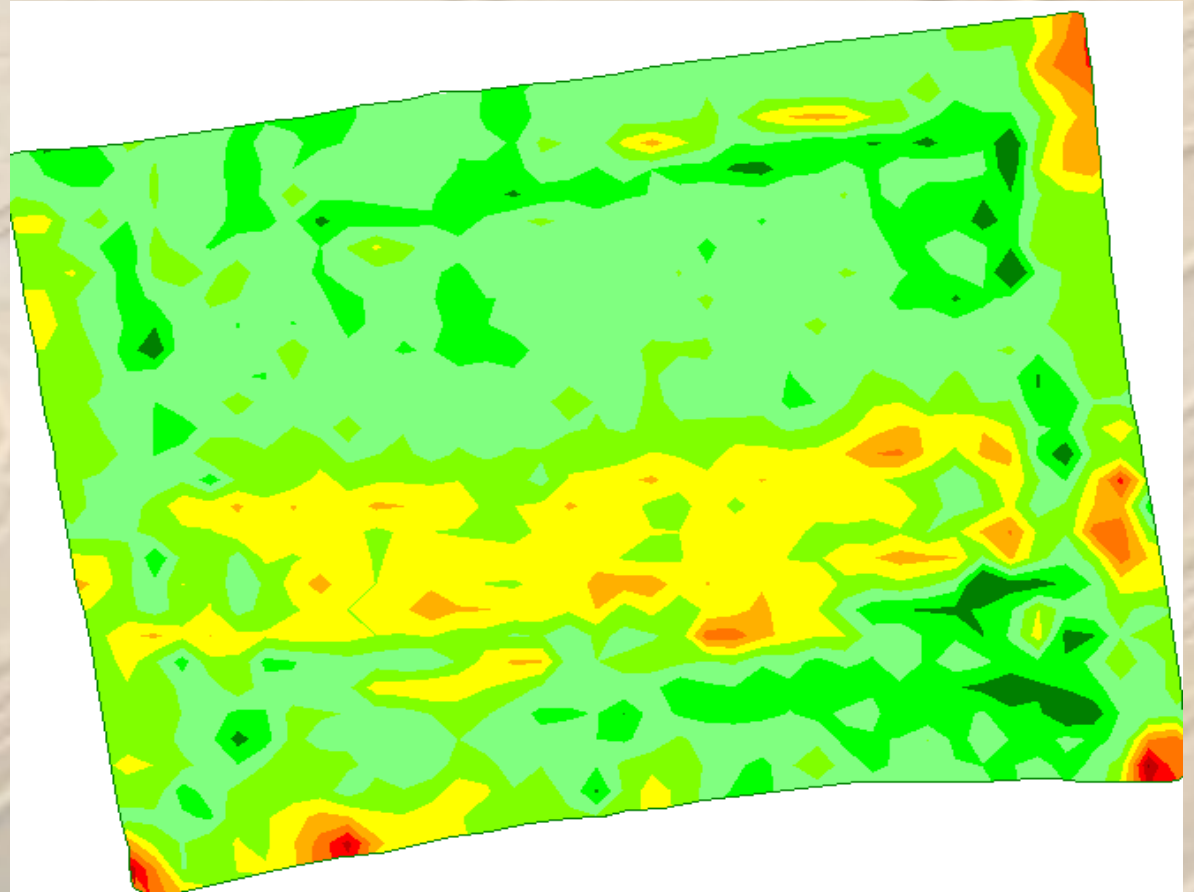
Benefits

Applications

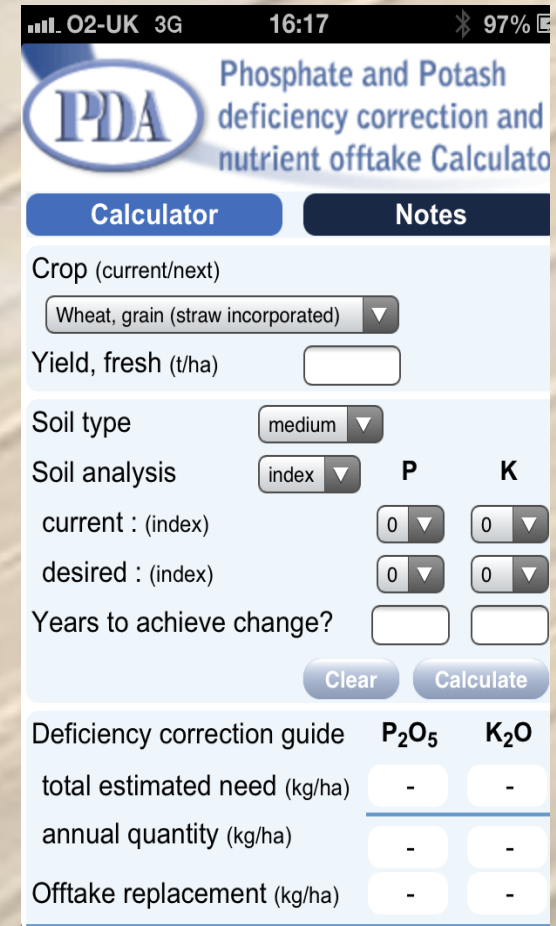
Applications

Key: Winter Wheat

0.00
< 4.00
4.00 - 5.00
5.00 - 6.00
6.00 - 7.00
7.00 - 8.00
8.00 - 9.00
9.00 - 10.00
10.00 - 11.00
11.00 - 12.00
> 12.00



Applications



Applications



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Definition

Benefits

Applications

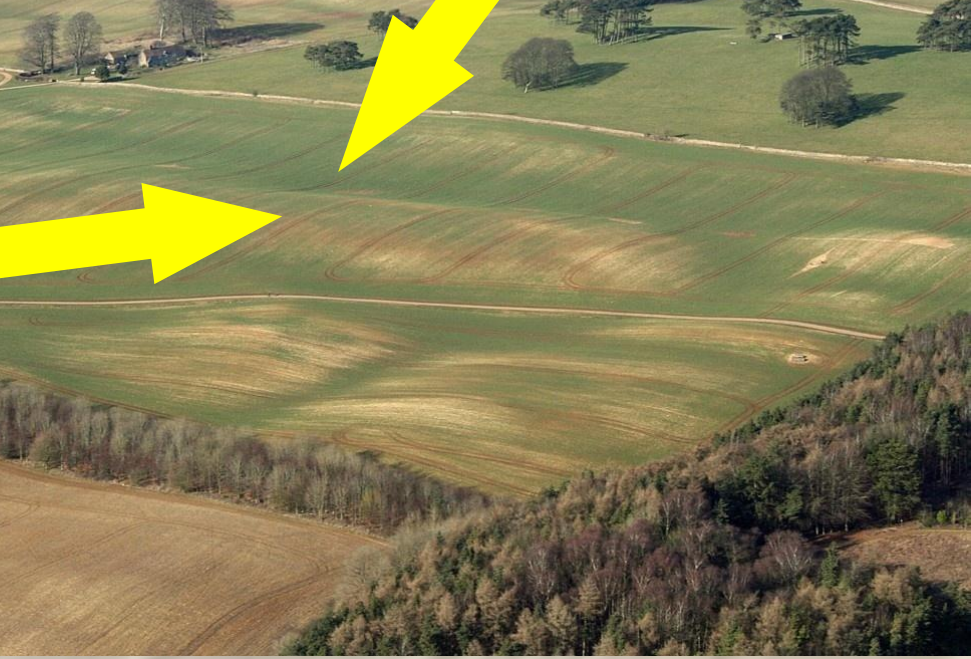
Case studies

Case study 1

1,560 Hectare Arable Farm



Case study 1

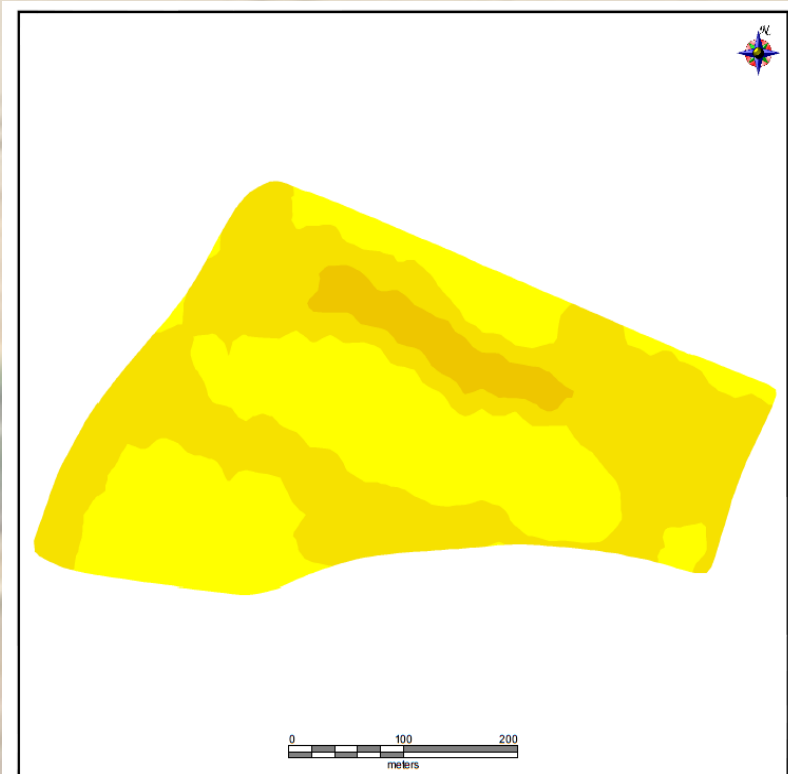


Case study 1



Case study 1

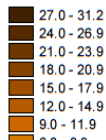
Field Conductivity Map



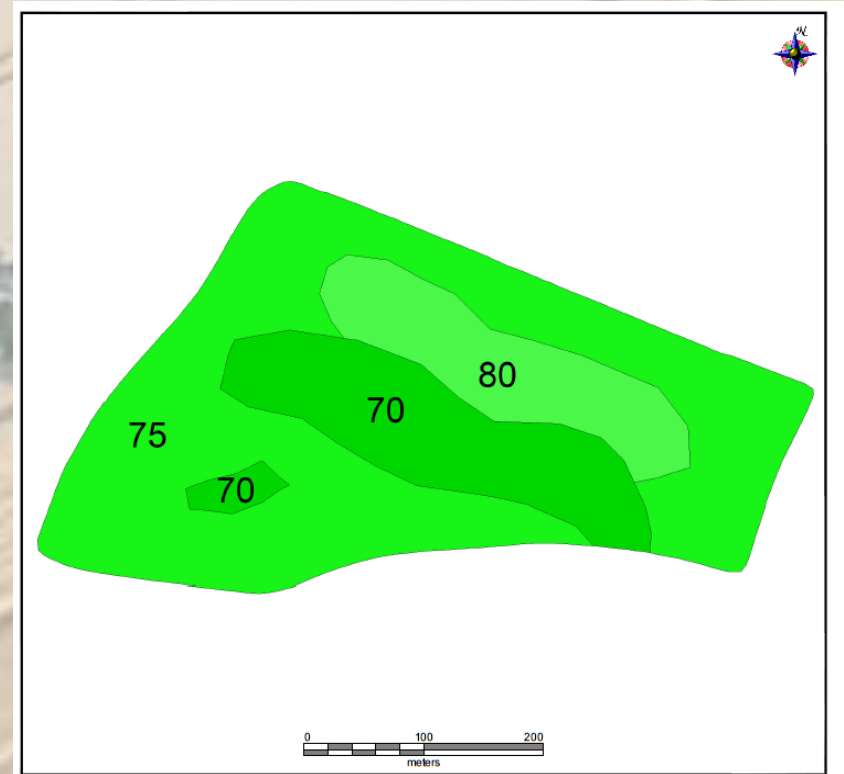
SOYL SEED

Profile: 0 - 40 cm

Date scanned: October 2010

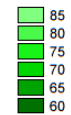


Seed Establishment Plan



SOYL SEED

These percentage figures are an estimate only of plant establishment over winter based on soil type.



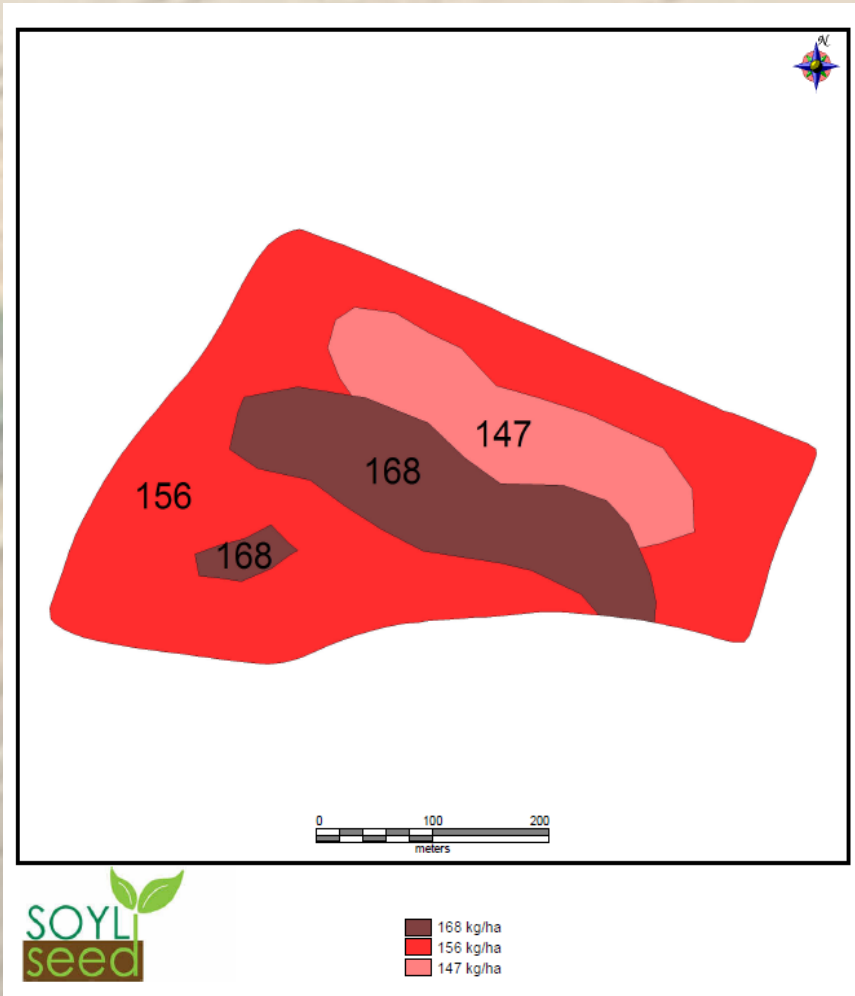
Case study 1

Variable Seed Rate in Action



Case study 1

Seed Rate Plan



Seed Rate Actual



Precision Farming

An aerial photograph of a large agricultural field. A combine harvester is visible in the center-right, moving from the top-right towards the bottom-left. The field is marked with numerous parallel, slightly curved tracks, indicating the path of the harvester. The ground is a light brown color, and there are some darker patches, possibly from soil or vegetation. The overall scene is a typical representation of modern agriculture.

Definition

Benefits

Applications

Case studies

Case study 2

360 Hectare Single Operator Farm



Case study 2



Case study 2

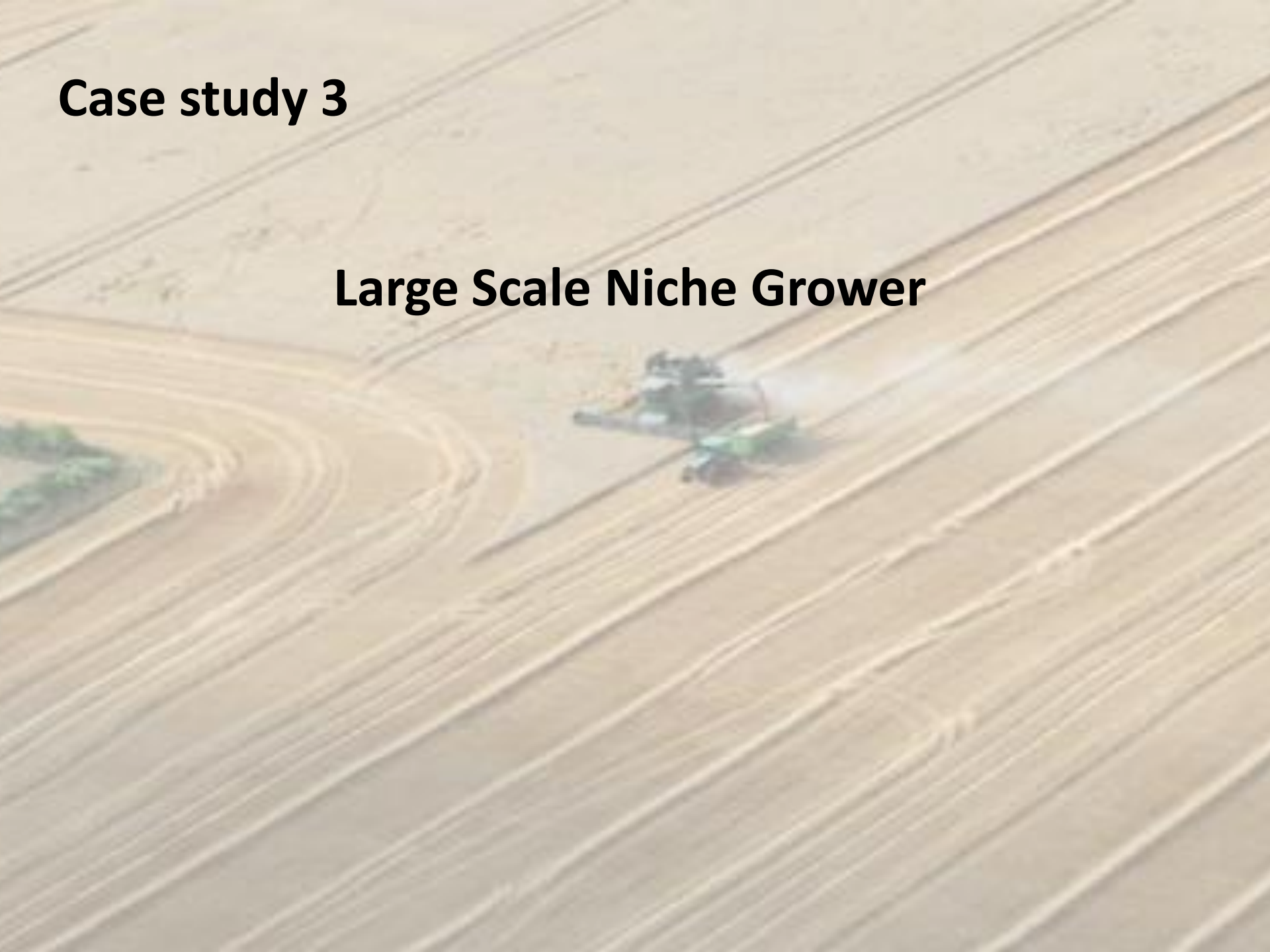


Case study 2



Case study 3

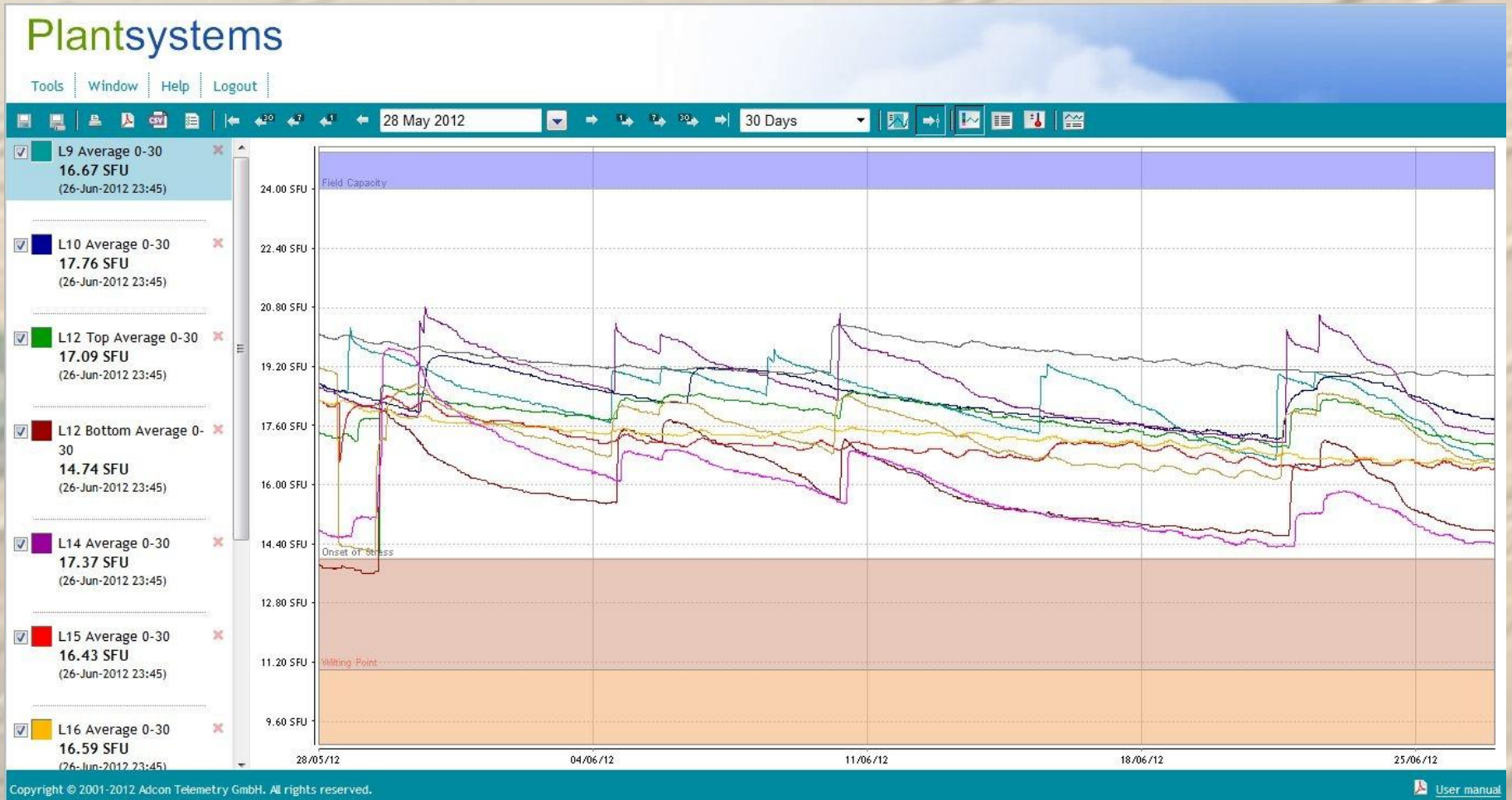
Large Scale Niche Grower



Case study 3



Case study 3



Case study 3



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Definition

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Next steps



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HELP

Precision Farming Calculator

This tool is designed to help you determine whether precision farming techniques might be suitable to your individual farming system. By entering information about your farm, the tool can help indicate which techniques may produce a benefit over investment costs.

You will need to provide some data about your farm, variation and system. When you are ready, likely costs and benefits will then be calculated and displayed to you on the screen.

You may select or deselect techniques and recalculate the costs and benefits of your new selections.

Some techniques may not give a positive net benefit in their own right, but by offsetting part of the costs of equipment or maps may still have a positive effect on the total net benefits.

Your potential total net benefit for the chosen techniques and options in your system will appear at the end.

Click on "Start Calculation Process" to begin the process for the first time, or choose an existing file from your computer and then click on "Load Previous Results" to load in some results that you have created previously.

> Start Calculation Process

OR

Select Existing Results File

Choose File No file chosen

> Load Previous Results

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