

PocketGEO/Sampview: Software for Nematode sampling

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Introduction

PocketGeo/SampView is a software program for soil sampling agencies. It will run on any handheld PDA and can be used in the field by the soil sampler. The program can divide farmer fields on site into an optimized set of areas to be sampled according to the restraints given by the chosen sampling method. The basic polygon of the farmers fields can be obtained by using a GPS receiver or can be drawn by using the stylus of the PDA and a background map. While taking the samples, the soil sampler can see himself walking over the field and along a predefined sampling trail if needed.



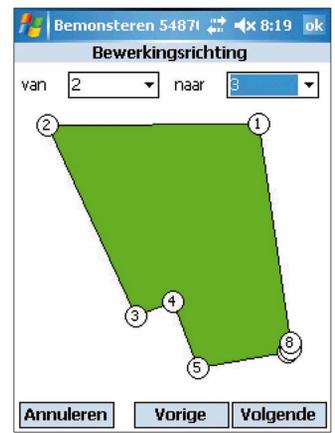
Step 1
Measure with GPS, draw or select the field section to be sampled.



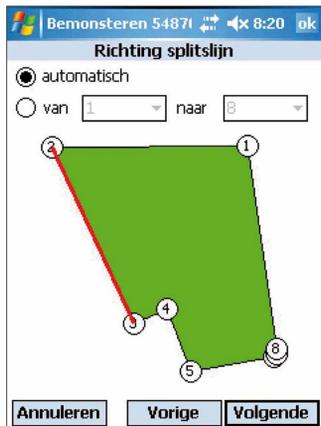
Step 2
Tab-and-hold on the field and choose in the menu for Nematode sampling (Aaltjes bemonsteren).



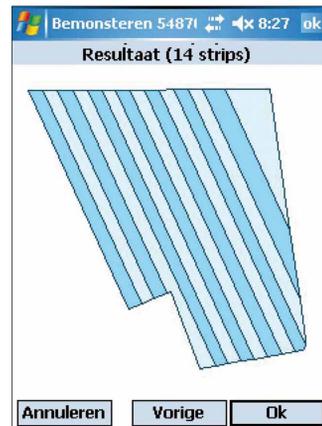
Step 3
Choose the sampling method and enter the first Sample number.



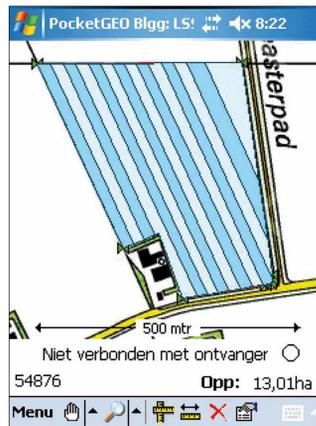
Step 4
Enter the direction of cultivation.



Step 5
The red line indicates the selected direction of cultivation. Now a split line can be entered manually to split samples in the direction of cultivation. On automatic, a split line will be used when the area of a single sample becomes too large for the method selected.



Step 6
The result of the calculation is shown for verification. In this case 14 strips or samples.



Step 7
After the results are accepted, the sampling strips are displayed on the map. The sampling can start.

Result

The software enables soil sampling agencies to generate digital geographic information concerning the soil samples to be taken. As the software runs on a PDA, the soil sampler can modify on the spot the field section polygon if necessary or create a new one use the GPS receiver. This provides him the possibility to make changes when the actual situation differs from that provided by the farmer. Using the SampView dll he can generate the digital sampling units on the spot. *PocketGEO* software provides the possibility to save the sampling information in XML-files. The digital geographic information concerning soil samples taken and infestations discovered can be used in different ways.

- It can be used in the communication between soil samplers, farmers and statutory agencies
- Used in advisory systems like NemaDecide
- Farmers using a Farm Management System can use this information to visualize the samples which were taken on his fields
- The information can then be used for Precision farming and Site specific operations.



Soil Sampling
The result of a stratified soil sampling method for phosphate.

The *PocketGEO/SampView* software can also be used for other purposes like digitising sampling information for other pests and diseases or even nutrients. The screen shot presents the same field as for the nematode sampling, but now displays the points where cores have to be retrieved for the statutory phosphate sampling method of the Dutch government. The GPS is used to check whether the soil sampler is within 10 meters of the sample position before he can use his pointer to indicate that the sample is taken and the sample position is logged.

PocketGEO/SampView is a software program developed by Plant Research International and Agrovision.