

ONE AgriTech Programme

Evaluation of New Technology

Technology assessed: SOYL Variable Rate Seed by S Gall, Glenskinno

The SOYL variable rate seeding is technology which uses soil data through soil conductivity surveying and ground-truthing soil analysis. This produces a map showing the soil type and more critically the variation within a field. The soil characteristics has a link to the seedbed quality and therefore the establishment of the crop in the field. Once these maps have been created using SOYL's MyFarm platform, variable rate seed maps can be created on a seeds/m², kg/ha or plants/m² basis, with the aim of improving the consistency of establishment of the crops. Files can then be sent to the GPS enabled tractor which controls the drill seeding system to varied (variable?) seed rates on the go.

Criteria	Score (1-5)	Comments
Ease of Use	5	Platform is easy to use via website or app once user gets used to it. Can calculate the seed rate based on various parameters depending on what you want. Needs a bit of farmer/operator input to make sure maps reflect what is happening on the ground. Once map is created it is sent to the MySoil app on the iPad which then controls the rate in the drill. All easy once you have got your head round it.
Reliability	5	All very reliable. Took a while to get all the machines used onto the app and connections to the machines' control box. Backup has been very good when help has been needed.
Value – what are the benefits?		• Seed rate matched to soil conditions • Greater consistency in crop establishment and growth • Efficiency in use of inputs with less waste.
Any drawbacks?		• Can be a bit fiddly exporting files from platform to tractor but this is improving as technology moves on, especially with some of the manufacturers' newer GPS and software systems.
Effectiveness – delivered what anticipated?	5	Crop establishment has become more consistent especially in fields where soil type changes from sand to heavier clay. No significant saving in seed through using this technology but the correct rate is now put in the right place. Since using Variable Rate Seed, crops have become less variable which makes supplying the correct nutrition to these crops easier and helps with control of weeds and disease.
Value for money?	5	Initial outlay of getting soil scanned and analysed has potential to be significant. This is then used for a number of years. Costs for creating the maps is part of the system. Payback on the initial investment has been within the first couple of years of use.
Overall Assessment	5	Using this system has giving greater consistency in all our arable crops. This has helped to lift our average yields over the last few years and given a return on the initial investment.