



Precision farming saves fuel

The basics

Precision farming uses Global Positioning Systems (GPS) and a wide range of sensors, monitors and controllers such as shaft monitors, pressure transducers and servo motors to direct equipment movements and control field operations like chemical and fertiliser applications more accurately. It has a clear impact on energy use as it eliminates wasteful operations whilst providing optimum coverage.



In practice

Close control of the operations of field equipment helps to reduce energy in two main ways.

Firstly, it eliminates overlap as it is often more accurate than human guidance. Work in America has shown a reduction of around 4% in the average distance travelled to complete a particular operation like spraying or fertiliser application when using a GPS system.

Case study

Henry Gibbon from Kidwelly, Carmarthenshire has been using precision farming on the family farm and in his previous contracting business for years.



Henry said: "The precision farming equipment I use allows me to ensure that I keep my input costs to a minimum.

"Whilst the equipment is not cheap the benefits are clear and I would recommend them to anyone. I have no doubt that using a contractor with this type of equipment makes good business sense."



Cronfa Amaethyddol Ewrop ar gyfer Datblygu Gwledig; Ewrop yn Buddsoddi mewn Ardaloedd Gwledig
The European Agricultural Fund for Rural Development: Europe Investing in Rural Areas



Canolfan Datblygu Llaeth
Dairy Development Centre

DairyCo



Llywodraeth Cymru
Welsh Government



Secondly, the optimisation of the application of sprays, fertiliser and seeds results in a more uniform delivery and reduces over use of the product.

In addition - Yara now produce a commercially available tractor mounted tool that allows farmers to measure a crop's nitrogen content and subsequent requirement and vary the fertiliser application rate as required thus ensuring that the optimal rate of fertiliser is applied to each individual part of the field. This reduces the amount of fertiliser used and is also kinder to the environment.

Of course precision farming optimises all inputs and produces savings across the board. Clearly any energy related input will be reduced. This even stretches to things like water where pumping and application costs will be reduced.

Capital investment is significant with precision farming equipment but the economic benefits from better agronomic performance and fuel savings are now making it a more viable option for some farming businesses.

Potential savings

Minimum savings of 5% in energy are likely with precision farming, but this is likely to rise to over 25% where significant reductions in field operations are possible.

For more information on how 'Precision farming saves fuel' please contact:

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