Science needed to underpin carbon calculators

Responding to the challenge of reducing carbon dioxide and other GHG emissions is possibly the biggest issue to face livestock producers for many years, according to **Dr Phil Holder** from ED&F Man.

While measurement is key to the management of emission reduction, there is still a substantial number of carbon calculators available for use on farm.

"Farmers are very good at responding to challenges and with good science and good research they will be able to reduce emissions, but do we need so many calculators? It seems there is no ownership of the whole carbon measurement arena at the moment.

"I think there is a real danger that if the industry does not take ownership of the problem, then others will try to do so. It is probable that they will know the industry less well and may not do the best job for agriculture.

"Certain groups will use the environment as a tool against the animal production industry and we have to remember the fundamental point is that after taking actions to mitigate emissions, farms have to be profitable."

He stresses that mitigation measures have to be cost-effective, easy to implement, practical and improve resilience. Measurement of emission levels and the progress in reducing them at an individual farm level will be crucial. While good housekeeping and improving efficiency will make some improvement, we need funding to allow research to plug gaps in our knowledge and continue to drive reduction.

"To date it is the more progressive farms who have engaged with carbon audits. They will already have addressed the low hanging fruit and we need to be able to help them make further progress." He comments that only a small proportion of farmers have engaged with carbon reduction so far, suggesting that having too many calculators could be part of the problem.

"Farmers need a scheme which is easy to use and is appropriate to their system, but may be struggling to decide which is the best. While there are fewer tools available now that there were initially, the choice is still over-whelming. We must avoid a situation where farmers have to enter data into different systems for different audits. Farmers are struggling to get excited about carbon reduction, in part as a consequence of not knowing whether a particular measurement is good or bad and what they can do differently."

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There are still over 50 systems available but as all schemes use the same basic equations, there could just be one scheme. Having multiple schemes just causes confusion, misinformation and delays engagement. Fewer calculators, giving the same results from the same information would help increase uptake and help the industry demonstrate that it is serious about reducing emissions.

The danger is also that calculators may be meeting the requirements of a range of masters with different objectives. Are the requirements of processors and retailers truly aligned to the needs of farmers?

"It is essential that the whole industry gets a grip of the issue, managing it themselves with farmers, farming organisations, supply companies and researchers driving the development of schemes which will deliver sustainable, low emission farming businesses," he comments. "Schemes need to be fundamentally based on good science that can be applied on farm but there needs to be a high degree of industry co-operation, certainly on the equations used and how carbon is measured.

"There is an analogy with dairy rationing. There are numerous rationing systems in operation but at their heart is a standard set of equations. The front end may be different but the core should be the same."