talking tithe a word from the editor

What makes a good farmer?

It's an interesting fact that YEN farmers' average wheat yield is 10.8t/ha — nearly 3t/ha above the national average.

You could argue the figures are somewhat skewed — you'd only put your best field forward, perhaps, and then may throw everything at it to make it perform.

Maybe more interesting then is the spread — it ranges from 5-16.5t/ha. It makes you wonder what it is that allows some farmers to achieve more than three times as much wheat off a ha of the UK's soil than others.

While it may be a cause of some bemusement to farmers, scientists, being what they are, have turned it into a research project. It was this that brought together 12 YEN farmers, myself included, to a meeting in York recently. Also present were crop physiologists from ADAS as well as social scientists from the Universities of York and Sheffield.

I ought to stress at this point that I don't think I was invited for my farming prowess — the

average wheat yield of those present was a slightly below par (for YEN) 9.4t/ha, and I've a horrible feeling it may have been my rather meagre contribution that pulled down the average on the day. But the rest of the growers present were clearly somewhat more accomplished than me at turning out a wheat ear of promise, and that's what was under investigation.

YEN is now in its seventh year, and over that time has clocked up 570 individual entries, with yield and some detailed info on management, as well as a host of stats that go with each entry. That's a pretty impressive dataset, so you can't really blame the ADAS scientists for doing a bit of analysis and number crunching to try to find some common threads that would pick out the winning wheats from the losing laggards.

Weather, it may surprise you, causes just 25% of the variation, leaving 75% associated with farm and husbandry. Water-retentive soils tend to yield more, slurry use is associated with a boost (but not compost or biosolids) and yields are better after a break crop. But there's no association with cultivations — that new drill may not get your crop to the yield point you search for after all.

Choice of variety won't guarantee you a barn-busting

wheat (sorry, breeders), although there are differences in quality. While there's a positive association with yield for those who make good use of PGR and fungicides, the ADAS team didn't indicate any difference between the brand names chosen.

It has to be said, these are just associations, so those who achieve high yields just happen to follow a management practice. But that still leaves a large margin attributable to what the researchers call a 'Farm Factor'. Although soil type plays a part, the rest comes down to that overused phrase 'attention to detail'.

What this appears to point to is that if you occupy your days thinking about how to get high yields, you'll probably achieve them. While if you're easily distracted, or mope around cursing Brexit, the weather or Chris Packham for bringing poor performance, it will be a self-fulfilling prophesy.

That's the point where the social scientists stepped in. The table was duly strewn with different-coloured sticky notes, and we were all encouraged to write down and share our thoughts.

This was probably the most fascinating part of the meeting. I'm not sure we actually got to the bottom of what makes a good farmer, but some common threads appeared — many of us felt we were born to be farmers, compelled to produce stuff that people actually need and that we take a rather curious pleasure in dealing with constant challenges. What was clear was that we probably obsess too much about what we put on our crops and don't give enough thought to how we do it; that we overthink how much we should move the soil and underplay the importance of understanding it.

An interesting factoid that fell out of the meeting is that soil health is probably an area undervalued for its contribution to yield, but has always been poorly funded when it comes to research. And it's also probably the area of crop production that makes the ag supply trade the least amount of money.

Another interesting point is that humans are very particular animals in the way they interact — we need other people as well as situations and factors to help us make better decisions. The relationship between farmers and scientists in particular is complex, poorly understood and ripe for change — the traditional model of knowledge passing down from academia to the farming community is looking seriously outdated. I think we don't spend enough time with scientists and I'm particularly looking forward to our next delve into social science.

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