talking tilth a word from the editor

progress we need.

Can we fix the broken pipeline?

The problem with an innovation pipeline is what happens when it runs dry.

Anyone who's ever dealt with a ruptured pipe will know how infuriating it can be — not just the lack of supply, but tracing the cause of the problem. And this is what strikes me when I hear agchem manufacturers talk about their innovation pipeline (see Innovation section, starting on p72).

My farm's supplied by that pipeline. For decades, it's served us well, and as products or ideas run a bit dry at our end, turn on the tap and hey presto — out comes some novel nuance we put to use on our crops and eke out that extra bit of yield. We've hardly had to think about how it got there or the infrastructure that provided it.

But now, for farmers in Europe, the innovation pipeline has just about run dry. We get the odd gurgle and splutter, but let's face it — we can't now rely on it to keep crops in good fettle. We have to look at our own resourcefulness, relearn and share ideas to make the That's not such a bad thing in itself, and it probably makes us in Europe better farmers. But what really irks me is when I look towards Super-ranch across the pond. There's been no yield plateau over there. Instead a beautiful, glistening pipeline relentlessly pumps out fresh sustenance and I can see their crops thrive as a result.

I know exactly what the technology is that's kept Super-ranch's pipeline well maintained and the crops progressing nicely: GM seeds and traits. The supply of that material into the European innovation pipeline was blocked almost 20 years ago. There's now little of any value flowing out of it and supplying my farm, and just keeping the stuff coming through becomes ever more expensive. So it's hardly surprising that the pipeline's in a very shoddy state and not really fit for purpose. If I had Super-ranch's pipeline, however, just think what I could do with my crops.

What makes it worse is that I understand Super-ranch's pipeline has been upgraded. Not only does it carry novel seeds and traits, it takes new digital technology, and those across the pond are already boasting about what it's doing for their crops.

Digital farming is definitely the future, but I look again at my own antiquated pipeline there's no way it'll take that technology. I've missed out on the infrastructure bridge that GM provided and I'm sitting in a knowledge gap. I can see where I need to be, but I don't know what to put in place that'll get me there and revive my flagging crops.

There is a plus side: Super-ranch may have access to a suite of exquisite solutions and produces marvellous crops as a result, but it's now very, verv dependent on its pipeline. I'm not sure I'd like to rely on mine to that extent, even if it was in better shape. This gives me the prompt to think outside the box and explore new ways to get the same solutions onto my farm and into my crops ---pick the right one (or maybe it's a combination) and I'll end up far better in the long term than those who rely on a pipeline.

Perhaps Brexit will offer up a new solution --- mine is not the only farm around here with a broken pipeline and my perception is that Defra's more sympathetic to my predicament than the EU ever was. With the right ideas, some local collaboration and government backing we could find out between us what works. Who needs a costly, clumsy pipeline when maybe a sleek, super-fibre cable would do a better iob and be far more future proof?

Then maybe I need to look with new eyes on the machines that do the work. The implements have evolved over the years in line with that innovation pipeline. But maybe those tools should do a different job altogether, using remote guidance, automation, machine learning and Al. Do I need machines at all? Perhaps a swarm of small robots and sensors will do twice the job the big, cumbersome hunks of metal currently clunk through.

The fact is, all these things are possible. I press my face against the window of the future and I'm excited by what I see. But I really don't know which of these wonders is right nor where I should apply my resource. I don't have a working, operational pipeline that leads me reassuringly towards a particular solution. I could just stop, leave the pipeline to rust away and rewild the farm. But I think it'll be far more interesting to stay in the game, keep eyes and ears open and see how things develop, with the freedom to decide my own destiny.

One thing's for sure, however — I'm done with staring at a pipeline that lately has just proven to disappoint, and I'm fed up with trying to plug the leaks. If it splutters back into life, I'll view that as a bonus.

Tom Allen-Stevens has a 170ha arable farm in Oxon, and its own natural spring, which may be worth doing something with.

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