

# Thriplow Farms

## Red Numbers

### Annual Report XLVI - 2019

I suppose that as a Last Day, it could have been much worse. With harvest having been rained off the previous day, Saturday July 20th found myself, Sabrina, Elyse & Maddie heading off to London for a peri-harvest outing. First stop was Kulu Kulu, a kaiten sushi place that I've been going to since I was a kid, and now my two love it as well. It wasn't a vintage visit though, as on the weekends there are fewer people in there, so the food sometimes spends longer than ideal on the conveyor belt. My particular favourite thing they make is a prawn tempura and salmon temaki roll, but it must be fresh, otherwise the tempura goes soggy, and the whole thing goes tepid. On this occasion I had spied a few tired examples going round and round (incidentally, that's what kulukulu means in Japanese), so I ordered one directly from the waiter. Obviously, I thought, he would know that this was my Last Meal, and a fresh temaki would be despatched straight away. I was wrong. He snuck over to the other side of the restaurant where he thought I couldn't see him, plucked a limp one from the conveyor, and brought it over. Being a feeble Brit, I said thank you, and averted my gaze.

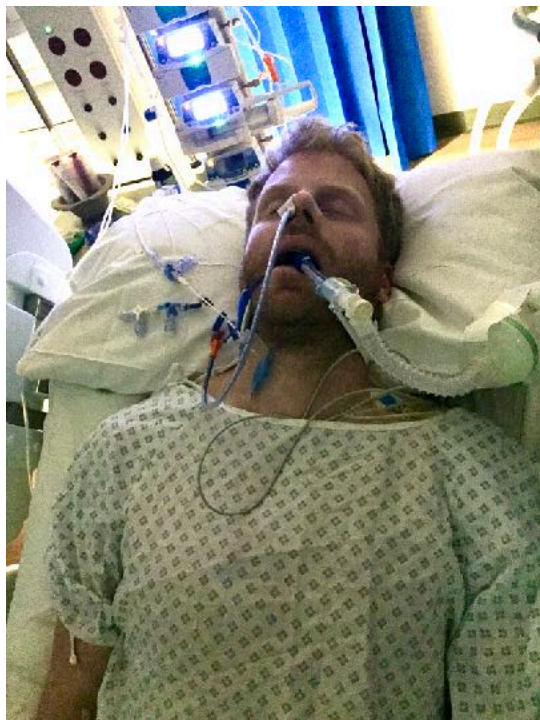
Next up was Milk Train, an ice cream shop in Covent Garden selling absurd constructions that are way too sweet for me - and they would never have fit on top of 58 pieces of sushi anyway. But those without a Y chromosome seemed to enjoy the sugar rush.



*July 20th 2019*

If I had to choose a Last Movie, it might have been Shawshank Redemption, or more likely The Big Lebowski. It would *not* have been Toy Story 4. Luckily I managed to sleep through some of it, but no one was impressed; what a waste of an afternoon. At this point, the original plan had been to stay in London, and drive back home the next day. For whatever reason, we decided that coming home would be easier, so that's what we did. Kids asleep in the car, lift them to up to bed - easy life. What remained of the evening was boring, and in fact I think Sabrina and I had a silly argument over how to bake a spherical cake - something neither of us had any experience with. I went to bed slightly irritated.

I can clearly remember my next thought: This dream is incredibly vivid. More important though was my first sight. Like a duckling which imprints on the first thing it sees, I had a new Mummy. And it was a clock. Or to be more precise, in the pitch black, it was a set of Red Numbers. The Red Numbers kept on going up, sometimes in big chunks as I passed out again. Occasionally I would look down from the Red Numbers and wonder what the man sitting in my room, typing on a computer, was doing. Why are you here all night with me, isn't it boring? Don't you have a home to go to? At some point, after the Red Numbers had gone up some more, I asked where I was. "You're at Royal Papworth, you've had a cardiac arrest". I shut my eyes, and the next time I opened them, the Red Numbers were still there.



*July 21st 2019*

Soon it was morning, the lights came on, and the bustle started. One nurse came into my room, "Isn't your wife amazing? We only do two minutes of CPR at a time and then swap over, it's such hard work. She did 15 minutes on you all by herself!". I grunted. My brain still wasn't fully switched on, but at least I still had the Red Numbers to keep me company: they knew how to keep me happy. By now I could see that the Red Numbers was actually a clock, and it had a naff little wire coming out the side. I thought this was pretty incongruous amongst the fancy machinery everywhere else: surely the Red Numbers weren't an afterthought?

Sabrina arrived, in a dress, with a big smile. “I’m sorry I wasn’t here when you woke up, did you think I had abandoned you?”. No, I only care about the Red Numbers. “Why do you keep looking at the clock?”. Mummy? [OK, I didn’t actually think that, but let’s pretend I did]. Anyway, two days of eating bananas and potassium supplements followed, until it was deemed I was well enough to leave critical care, and head upstairs to a normal ward - one with no clock on the wall. Another couple of days later I went under the knife, to be fitted with my own personal subcutaneous defibrillator, just in case my heart decided to stop working again. That night it was morphine and not much sleep. The next day, time to go home. Two days of watching TV, then it was August 1st and the oilseed rape needed drilling. Everyone else was busy, and I was bored of watching TV. What a testament to our NHS that 11 days after I spent 15 minutes dead on my bedroom floor, I was back at work, albeit slightly uncomfortably. All I had to show for



*July 26th 2019*

it was a large scar (I now find out that chicks do not in fact dig them), and a very painful ribcage. Not many people can say that they have saved a life, but my wife can, and I am more grateful than I can express here. Perhaps one day I will even forgive her for the broken ribs? Over 90% of people who suffer a cardiac arrest out of hospital die, and many of those who don’t die are left with brain damage due to lack of oxygen. That I survived totally intact for almost 20 minutes before my heart was restarted is incredible, I really am one of the very lucky ones. Thank God Sabrina had that big ice cream on Saturday afternoon to keep her energised.

Obviously I’m quite happy to be still alive, but in hindsight, if I had to choose a harvest to miss out on then this would have been the one. If you can remember back to last year’s report, harvest 2018 had been very hot, very dry, and very quick. Having wrapped it up by August 3rd, we then had to wait ten days for some rain to make it worthwhile planting oilseed





*August 1st 2019*

rape into what had been concrete hard and bone dry soil. The rest of the autumn and winter was dry, so unlike the previous year, we came into spring 2019 with a very low amount of water stored in the soil. This would have been fine had conditions suited us, but unfortunately they didn't. Rainfall for the first five months of the year was 121mm, which in isolation is not crazily low. Unfortunately, the large majority of that came in tiny dribs and drabs of a millimetre here, three millimetres there. That sort of rain doesn't do any good - it evaporates before it can get into the soil. The final nail in the coffin was the complete lack of luck. Here you can tell I've fully qualified as a farmer, but we seemed to

miss all the showers. It seemed like every week a big storm would skirt by us a mile or two away, soaking Cambridge or Royston on the way past. Rain did eventually come in June, but by then the damage had been done on all but the latest crops. Now that I've got the excuses out the way, we can dive into *precisely* how bad everything was.

## **Wheat**

Another year, and another falling wheat yield. The headline result was 7.86t/ha, the lowest since 2001, and the only time I've experienced a yield starting with a seven. I do have some excuses though, but I will save them until the end.

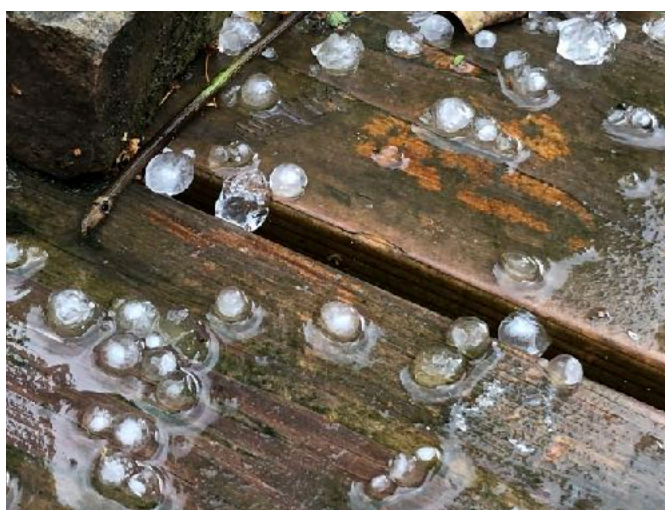
The southern end of the farm, with the light soil, hosted KWS Crispin for the second year running. The first field to be harvested - whilst I was busy obsessing over the Red Numbers - produced 6.22t/ha, a different one, planted after sugar beet, managed 6.75t/ha. Getting onto slightly better soil, it made 8.61t/ha, but a horrible field of wheat after spring barley only scraped in with 5.90t/ha. These were actually fairly encouraging numbers, leading me to project a yield of around 8.5t/ha based on historic data, a method which usually proves uncannily accurate.

Another of these lighter fields saw us growing a seed crop of Graham, which outdid its silly nomenclature to yield 7.58t/ha, a great result which saw me optimistically raise the yield projection to just under 9t/ha. Unfortunately this turned out to be a freak result, probably because the previous “crop” had been soya, which had ended up as a failure. Consequently, this field had effectively been fallowed, giving it a great entry for the wheat.

KWS Lili again proved a respectable variety, getting to the dizzying heights of 10.76t/ha on one of our best fields. Such a shame that it’s also our smallest field as well. Next door, on a piece of land ten times the size, it could only do 8.08t/ha, but in fairness around 10% of this field had been killed off in the spring to stop a rampant section of black grass from getting any worse.

In 2018 Freiston had been the star performer, so we upped the area grown significantly for 2019. In a field of second wheat on good ground it made 8.29t/ha, which I was mildly disappointed with since I thought it had looked better.

It was at this point in harvest where things started to go really wrong. We had taken perhaps a week or 10 days off combining wheat to get all the peas, barley and oats, and then the weather turned. On August 11th we had winds over 50mph, combined with the biggest hail I’ve ever witnessed, which is admittedly not a very high bar to beat. Whatever, the effect was fairly devastating on the wheat, which shed



*I blame all our bad results on this*

somewhere between 0.5 and 1t/ha onto the ground, depending on where you looked. I thanked my lucky stars that we had already combined our spring barley, which would have fared much worse than this. The next two fields of Freiston managed only 8.72 and 9.20t/ha. Not terrible, but lower than expected, and not enough to get the average going back up.

Finally we moved on to KWS Siskin on some of the best, and biggest, fields on the farm. Again, 9.18t/ha was not great, but the largest spanner in the works came on the neighbouring field which limped home with a really terrible 7.45t/ha. Why so bad? Actually the answer is pretty easy to determine, because we had these two fields right next door to each other, and there was only one difference. The decent field was planted in early October, whilst the bad one next door was planted a week later - not normally a big deal at that time of year. The reason it was planted later was because we had grown a catch crop of oats & oil radish in there, to satisfy our subsidy greening rules. Some aspect of this (my money is strongly on the oats) had a seriously deleterious effect on the establishment of the following wheat crop. It had looked below par all year, and in the end it cost almost 2t/ha of yield on a 64ha field. This is not a mistake we will make again.



*Both pictures taken on July 8th, but at different ends of the farm. One yielded just over 6t/ha, the other almost 11t/ha. Soil type makes quite a difference*

Having said all this, it's time for the excuses. I've already talked about what happened above, but let's take a quick recap. 4ha of one field killed off to control weeds. A lot of wheat on the ground from storms - I'm going to say 0.75t/ha to be in the middle of the range I think is correct. And the 1.75t/ha lost from the catch crop fiasco. If we add all those up then the projections I made after the first couple of fields were correct; the yield coulda, shoulda, woulda, been 8.6t/ha.



## Oilseed Rape

It's easy to say it was predictable - and in fact I did predict it in last year's report. After a stonking result in 2018, we came back down to earth with a bit of a crash this year. With an overall yield of 2.12t/ha, the result from this harvest was almost exactly half what we achieved in 2018. As with the wheat, drought was a major factor, and because oilseed rape is the first crop to mature, the rains in June came too late for any real benefit. In addition to the dry conditions, we were also very badly affected by the dreaded Cabbage Stem Flea Beetle in some of our fields. Perhaps in a year with more rain this wouldn't have been as much of a problem, but the two combined to lethal effect.

The first fields of Elgar actually performed quite well, at around 2.5t/ha. This is probably what we would expect from these light sandy soils in a drought year. Unfortunately the next field should have yielded a bit more than these, but ended up only just getting above 1t/ha.

Campus didn't really fare much better, ranging from 1.2t/ha up to 2.2t/ha on what is generally one of the best fields on the farm. Picto had a better result, with one field actually just getting over 3t/ha. This particular field had looked excellent all year, having followed beans instead of wheat as the previous crop. It was hit hard by flea beetle in some patches, but in others it was yielding well over 4t/ha.



*The rotten stem of a plant attacked by Cabbage Stem Flea Beetle larvae*

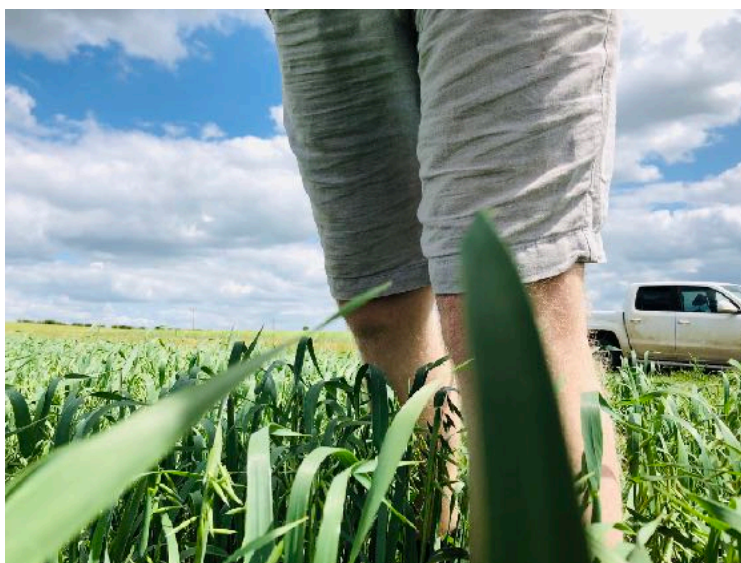
It remains a bit of a mystery why some fields had Flea Beetle much worse than others, although perhaps not coincidence that the very first two fields we planted were the only two which did not show much damage. Because of the dry conditions at planting we only started drilling at around the time I would have liked to have finished - perhaps if they had all gone in early the story would have been different? On the brighter side, although the absolute yield was low, we still over-performed the other oilseed rape yields reported in the area around us, so it could have been worse.

## Barley

We only grew spring barley again this year, although there was quite a debate about whether you should still call it ‘Spring’ when one field was planted in December and the other in January. The December field went in after sugar beet, around the middle of the month. The conditions were good at the time, and it looked highly promising all year - until the drought really took hold in April. The other field was drilled in January when I got very excited by the relatively warm and dry conditions. This is much earlier than we would normally plant, so it was a bit of a gamble. Soon after planting, the weather went cold, and it took over a month for the seedlings to emerge. I think in hindsight this was probably a good move, as our average yield of 5.34t/ha (both fields yielding a similar amount) was not bad for our area. No more barley next year though; the following crops are never any good.

## Oats

For the fourth year running, we have continued to grow Elyann spring oats. We have never hit the highs of the first year we grew them, when they yielded just under 7t/ha; this year it was 4.78t/ha. As with the barley, I planted one field in early January, into some of our very lightest soil. This ended up with a not-bad-for-the-year 4.81t/ha, whilst a better piece of soil



*When the oats are below knee height in June, it's not good*

further north only managed 3.98t/ha. This one had been planted towards the end of February, but it is very light (as in the colour, not the texture) chalky soil in places, which can struggle to warm up. A cold spring didn't seem to suit it very well, as the chalkiest parts of the field hardly produced anything at all. Our third and final field was planted at the same time, but on warmer, darker, soil. This yielded 5.69t/ha, bringing the average back up nicely.



## Peas

In a hard fought race, I think prize for Worst Crop of 2019 must go to the peas. I decided to plant the first field on around February 20th, almost a month before our usual start date. This wasn't a totally stupid decision, as at the time it was *very* warm, over 20°C, so they germinated very quickly. What followed was a very cool March, where nothing grew too much. Establishment was a horror show, with large sections of fields having few or no plants at all. Compounding this problem was my choice of herbicide to kill off the preceding cover crop. Not wanting to rely too much on the treasured glyphosate, we had also used something called 2,4D. This is known to have a potentially negative lasting effect, so there is a minimum time between spraying it and planting another crop. We did adhere to this timing, but still it appears that we suffered some sort of damage regardless. Next year we will grow peas again, and I hope to put in place a few improvements to give us a better chance.



*Too much of our pea crop looked like this*

Having got all that out of the way, I suppose I should admit to the result. I thought we wouldn't sink below 2018's level, but 1.61t/ha this year was another step down. This was split between the yellow pea Kerani, at 1.44t/ha, and the large blue pea Prophet at 1.69t/ha. Next year we will grow only Prophet - a variety we have had good success with in the past, with yields over 4t/ha, even with direct drilling.

## **Sugar Beet**

Nope.

## **Beans**

I remember watching an episode of *Tomorrow's World* about 30 years ago, where they performed an experiment by showing a job interview, and then the viewer could call in and say if they thought the person being interviewed came across well or badly. The twist was that they showed a slightly rearranged version depending on where in the country you were watching. They were trying to test the idiom *First Impressions Count*, and the result was actually the opposite - last impressions were much more significant. This is something I've always remembered, and have found it to be true from personal experience as well.



So in that vein, we can finish the cropping section with winter beans. There was only one field this year, on our heaviest, stickiest, nastiest land. We drilled in towards the end of October, what I would consider optimum timing. It went into the ground well, if perhaps not quite deep enough. Throughout the spring it looked patchy and mediocre, but in June it bloomed, both literally and figuratively. With beans maturing towards the latter part of harvest, I didn't dare to dream too big, having seen the other rubbish we had produced. I needn't have worried, as we managed to just break our farm record yield from 2014, and our lovely Tundra yielded an even more lovely 5.94t/ha.

## **Livestock**

The dog spent a week in hospital, at great expense, recovering from what turned out to be a neospora brain infection. This reminded me why I didn't like keeping animals.

## Machinery

For a few days I was seriously considering buying a new tractor this year, but then harvest happened. One piece of machinery that did make it onto the farm was a Protech post knocker. This is a really nice bit of kit which fits onto the front of the telescopic loader, and allows us to bang in fence posts much more accurately, and safely, than we could before. Even more exciting was the arrival of something I have been coveting for years; a magnetic parts tray.

## Experiments

We hosted two sets of relatively formal trials this year, both on wheat. Firstly we looked at the timings of spring fertilisers, and overlaid it with a series of micronutrient trials. What we discovered was that putting all the fertiliser on early was just the same as keeping it until our normal timings, but if we left half of it until later then the yield was reduced by 0.5t/ha. This is probably what we would have expected in a dry spring, so no big surprises. None of the micronutrient trials showed any gain, again perhaps not a massive shock?



*Early fertiliser always looks good, but doesn't always mean higher yields*

A different trial saw us looking again at fungicide treatments on wheat. We tried some plots with no fungicide at all, some with just one, and the rest had two. I was convinced that dry conditions at the T1 timing would mean that there would be no response from this treatment. I was wrong. Both the T1 and the T2 gave an extra 1t/ha over the untreated areas, making my life much easier in the future. If it paid in 2019, it's probably going to pay every year.

Going forwards, the future is bright for trial work at Thriplow. We have gone into an agreement with Agronomy Connection - the new agronomy offshoot from Agrovista - to run



a Conservation Agriculture Research Farm. The fertiliser timing trial was a small taster, but there are more ambitious ideas to come. The idea is not to look at the same old things again like is it better to plough or to direct drill, but rather to assume we are going to be using regenerative farming practices and so discover what the best agronomy practices will be in these new systems. Almost all of the research we currently use to inform our day-to-day farming decisions are based on data from conventional farming, and we suspect that's not always going to be valid. Some of the areas we will be covering in this first year will be pre-emergence herbicide timing, cover crop destruction timing, phosphate fertilisers and seed dressings, stubble digesters, nitrogen timings, and maybe some more on fungicide treatments as well. It should be exciting.

## **The future**

In 2014 and 2015 we had some of our best ever harvests, with wheat yielding 10.7t/ha and 10.4t/ha respectively. The following season we switched to full time no-till, and subsequently the wheat yields have been 9.1t/ha, 8.7t/ha, 8.1t/ha and now 7.9t/ha. You don't need to be a statistical genius to see what I'm getting at now. So the big question is obviously, how much of this is due to the weather, and how much is due to the management? This is very hard to unpick, which is why we spent several years before taking the plunge comparing no-till with our old system of min-till. In that time I couldn't detect any differences, so we made the change. Subsequently we have generally cultivated small parts of some fields every year, for a number of reasons. One of them though is so that I can keep a handle on whether it makes any difference to the crop. Invariably I am surprised, and there is actually no difference. It's not a very scientific approach, but it keeps me somewhat sane, and not having to wonder What If? so much. Do I think that no-till has caused these drops? No I don't, but it is definitely something to keep an eye on.

Another critical point to consider is that we don't actually care about yields, we care about cash. Turnover is vanity, profit is sanity etc etc. On top of thinking about cultivations, I've been trying to focus a lot on the variable costs of the business too - that is, how much do we spend to grow the crops. For this I think a comparison is in order. If we look back at 2011, a comparably dry year, we were spending £550/ha to grow 8.05t/ha of wheat. This year, we spent £405/ha to grow 7.86t/ha. If you assume a sale price of £150/t, for a fair

comparison, then we made a gross margin of £657/ha in 2011, and £780/ha in 2019. It's a similar story for oilseed rape - growing costs of £657/ha in 2011 and £405/ha now. Although the reduced yield this year eats up that advantage and more, back in 2018 we made tonnes more money per hectare than we did in 2013, which is officially our "best" ever year for oilseed rape. Additionally, we now grow a companion crop with the rape, turning it into a soil improving cover crop as well as a cash crop. Anyway, next time a farmer tells you their yields, ask for the gross margin figures as well, and see what the response is. You could even asked for their fixed costs too - personally I have come to realise that having tractors with an average age of almost eight years is significantly better for the bank balance than when they are all two years old.



*The future*

I'm still pessimistic about the chances for farming in general going forwards, for a number of reasons. Long term I believe meat consumption will reduce (or even stop), and since such a large proportion of what we grow ends up inside an animal before it hits our stomach, that won't be good for business. I've specifically written this report before our General Election so as to avoid having to get too upset about what is going to happen. I am personally disgusted by the complete and utter disregard Conservative politicians seem to have for the truth now, and equally by the fact so few people seem to care. Corbyn is terrible in his own ways, although

even more ridiculous is the Labour party that hasn't gotten rid of him yet, which surely would have resulted in the annihilation of the Conservatives. Anyway...I do not believe Brexit will be good for farming in the UK, but I very much hope to be proven wrong.

Finally I guess I should talk about my own future, because I am so ridiculously lucky to have one at all. I dedicate this report to everyone who has helped me in July, from the first responders, MAGPAS, the East of England Ambulance Trust, Addenbrookes A&E and all of Royal Papworth. I've now seen first hand what sort of person you have to be to work as a doctor or nurse, and I would not want to do it. So many of the people who cared for me have come to this country from the EU or beyond, some of them in the last couple of years. I'm not quite sure why they made that decision, but boy am I glad they did. Without them, and Sabrina "Chest Crusher" Walston, someone else would have been typing this report now. Who, I wonder?

David Walston

December 7 2019

@OOOfarmer



*Mummy*