

## **Binders, Combines and Yorkshire Farming**

As mentioned elsewhere on my blog, I grew up in a farming family in North Yorkshire, UK. This is not totally correct. My grandfather on my father's side originated from the Middlesborough area and moved to a village just north of York. My understanding is that during WW2 he ran a successful taxi business in an area that had many bomber bases flown by British, Commonwealth and Polish crews. My grandmother supplemented the family income by selling soft fruit produce in the local market.

There were family connections on a local farm which was tenant farmed by my grandfather's two brothers (my Great Uncles) but he chose to set up a farm contracting business. What follows is my recollection of that period in my life to the age of 18 years. I have few if any pictures but will endeavour to add these as and when they emerge from family archives.

### **The Binder**

In the 40s and 50s the local farmers would cut their corn with a binder. This was a machine that chopped the corn stalks a few inches above the ground whereupon they fell onto a lateral moving bed assisted by a rotating set of 'sails'. The binder compacted the straw into sheaves with the ears of corn at one end and a twine string around the girth of the bundle. The binder could be pulled by horse or tractor. The width or breadth of cut was around 4 or 5 feet wide. The magic of a binder and the subsequent development of balers was the 'knotter' that tied the knot in the string around the straw bundle.

The sheaves of corn were dropped from the binder at regular intervals down the field. A team of manual workers, often women, would follow this cutting process by gathering the sheaves and stand them on end in a cluster of six or eight with the ears of corn at the top and the cut ends on the ground. This was called stooking. Stooking ensured that any rain ran off down the stems of the straw. This pattern of tent like pyramids in straight lines up and down fields was a characteristic of the English countryside in this era. As kids we loved to play in the cut cornfield and make dens inside the stooked pyramid. So too did the local wildlife.

The cut corn stalks may not have been fully dry depending on when the corn had been cut and the associated weather at the time. The stooks would therefore stand in the field and get the full sun to dry them out before being gathered for transportation to the stacking yard. My role in this from an early age was to drive the tractor very slowly up and down the field as the family and workers would use pitch forks to load the sheaves onto the towed trailer. There would be at least two people on the trailer making a firm stable load. With the correct speed down the field, 2 or 3 loaders could keep the stackers occupied. Depending on the crop yield, the sheaves could vary in weight. Depending on the weather leading up to harvest, the corn stalks might have suffered from being laid flat on the field making the cutting process more difficult and the potential for blockages in the binder. In heavy rain the corn could have been so badly laid flat that the corn ears could secondary sprout before being harvested. Binders like the later combines used dividers and lifters to separate and lift the corn to present it to the cutter blades at the front of the bed. Blades could be plain or serrated depending on the quality and condition of the crop. Repairing cutter blades was probably my first experience of riveting.

Once transported to the stack yard, the load would be offloaded and a new larger stack made of the sheaves of corn. The cut ends would face outwards to repel water and the stack would resemble a elliptical running track in shape with curved corners.

It would be rare for a farm to immediately thresh the corn to yield the ears of corn. It was much more common to leave this process until the autumn when a threshing contractor would arrive. Which is where in the early days my family stepped in.

## Harvest Time, Threshing and Combining

My earliest recollection is my father and his brother each having a 'threshing set'. Each set consisted of three implements, the threshing machine, a baler and a tractor to pull these two. The earliest I remember was each set being pulled by an Allis Chalmers tractor, probably a U Series given it had a skirt from mudguard to engine. These were ancient machines and could well have been lease lend imports. The throttle was a fixed ratchet device and I think one Allis had a winch on the rear. Both had power take off pulleys to drive the threshing machine by a long canvas belt. We later replaced the Allises with Fordson Majors which both had winches (I remember the registration plates being OAJ413 & OAJ414). One of the threshing machines was a Marshall brand (Cambridge ?) and the other a Crichton (Scottish ?). As already stated both sets had a baler but I don't have a clear image in my mind of what they looked like.

My father and his brother would have a busy contracting schedule going from farm to farm in autumn through winter. They had a paid supporting helper / worker in each team and the two pairs and their 'set' would aim to get finished at one farm and then move to the next farm that evening to be set up and ready to run early next morning. Setting up involved getting the threshing machine firmly located alongside the stack to be threshed. When on the road between farms the threshing machine had its left and right upper working floor hinged down. These were hinged up when in place at the farm and held out horizontal with supporting poles angled out from the machine frame. The machine itself was set on blocks and jacks to stabilise it. The towing tractor was reversed away from the thresher to tension the canvas drive belt that would drive both thresher and baler

The front of the thresher was where the residue threshed stalks were passed out to the baler and the baler in turn was powered from a secondary belt pulley on the thresher. The straw was nudged out of the thresher with straw walkers on cam eccentrics. We called them 'shakers' and during the summer season myself and my cousin would be gainfully employed cleaning out the previous summers rubbish from the 'shakers'.

### **The Threshing Process**

The threshing process was as follows.

Men on the farmyard stack of sheaves would hoist the sheaves onto the top of the thresher with its now extended working platform. Two men on top of the thresher would catch the sheaves and in one action cut the string around the sheaves and drop the loose straw with the ears of corn into the thresher. Rotating beater bars in what was known as the drum would then thrash the ears from the straw but this would include some fine waste known as chaff. A secondary rotating drum would create a high pressure flow of air that would separate the light weight fine chaff from the corn ears. The corn would pass to the rear of the thresher to a bagging off station manned by two or three men who would place hessian bags under gated chutes to collect the grain. The bags would be weighed as they were taken off the chutes to check their weight. They could then be either topped up or reduced in weight to match. A further team would be tying off the bag neck openings. There would be a further bagging point or perhaps a conduit under forced air to dump the chaff which would be later used as cattle food. Any rat made holes in the bags were stuffed with a handful of straw.

The straw that had been passed to the baler would be concentrated into bales and these would be taken from the baler output chute to be stacked in the farm yard. These bales were not high density as I remember them.

It was a dirty dusty job for everyone involved, particularly with a wheat crop which would be a very black dusty crop and similarly with barley which had fine 'horns' what would blow everywhere.

Each farm visited would have team of men organised for their threshing days. These would supplement the two men we supplied with the 'set'. Nearly everyone involved would be wearing a handkerchief over their mouth and would have their trousers legs tied tightly round their ankles to avoid rats and mice going up a trouser leg (yes it really did happen and often). The 'farm cats' (those not allowed in the farm house) would sit around the working area waiting for the vermin to appear out of the stack. A good farm cat could put a rat on its back with a single sweep of its claws.

### **Moving the Set**

Moving the threshing set around the countryside was not simple given the length of the tractor, thresher and baler combination. The North Yorkshire roads were narrow and hilly but clearly less busy than today. Quite often the baler would be dropped off at difficult locations and then retrieved later with just the tractor. The thresher front wheels were on a pivot steering axle and to avoid jack-knifing on hills there were stabiliser bars that could be put in place to make the front axle rigid. On steep hills the thresher had steel 'shoes' or 'sledges' that could be put under the rear tyres to slow its descent. I remember seeing one such event when at the bottom of a hill there was a water trough issuing plumes of steam when my father dropped the sledge into it. Quite often the tractor winch had to be used to pull the set to position on the farm.

Threshing days were long days. I rarely saw my father, as he left before I got up and came home after I had gone to bed having probably moved farm and set up for the next day. He came home black with dust. We had no bathroom and he had only the kitchen sink or a tin bath to get cleaned up when he got in.

The area had a close farming community often meshed with church and chapel attendance. Our contracting business took us to many farms and as a result we knew families over a wide area. The farms would provide a midday meal either in the stackyard or the farmhouse. There would be morning and afternoon 'lowance' or 'elevenes' for the whole crew. There were some fantastic characters to encounter and some big farm kitchen tables to sit round in awe as the head of the family carved the dinner joint and passed it down the table.

### **The Arrival of the Combine Harvester**

The advent of the combined harvester changed the business model. As with threshing, a solitary farmer could not justify the cost of a combined harvester but could afford to contract one for a few days or weeks in summer to cut their crop. My grandfather invested in two Claas Super combines. These were not self-propelled but were towed behind a tractor and had a separate engine (Perkins) on top of their body to drive the machine. We had one instance of the engine catching fire and the local fire brigade managed to turn over their tender on the way to the fire (which was put out instead with a hessian bag).

The cutter bed was folded up while on the road and then hinged down before cutting. I can't remember the cutting breadth but it must have been around six foot or so. I seem to remember that both machines had 'bagging' platforms on top which needed an operator to control. Once a bag was full it was tied up and slid down a chute where the bags were held pending release as a cluster onto the field. A second team would go round and pick these up onto a trailer. The weight of a bag was such that two men with a strong stick held between them could balance the bag on the stick and would lift the bag onto the trailer. There were inevitably burst bags from the chute drop or bags what had holes made by rats that dribbled the grain out. You learned your knots quickly. I seem to remember that the Supers had a baler integrated on the back but the straw bales were not heavily compacted.

## Machinery Evolution

The Supers were a step forward and many farmers decided to use us for combining rather than threshing. The limitation of the bed width led to our later upgrade to a Claas SF self-propelled combine for my uncle to drive and my father migrated to a Massey Harris 780. Both these machines had bagging platforms and chutes but no integrated baler. The straw was dumped out of the back of the machine into rows for separate bailing. Initially we had a Jones Lion baler which I think used wire to bind the thrashed corn stalks. It was one of the earliest balers that could be towed around the field by a tractor rather than stationary operation. (The history of the Wales based [Jones company](#) is well worth a read). We replaced the Jones with a New Holland baler. There was a collection sledge towed behind the baler which could be periodically tripped open by the tractor driver to allow clustering of the bales around the field where they could be substacked. The quality of the person bailing the straw was defined by how many shear bolts they consumed in the season through overloading the baler.

We eventually removed the bagging platform from the SF and replaced it with a storage tank and emptying auger. I remember going to Manns of Saxham to collect the tank with my grandad's car and trailer. I remember on that journey going past an airfield with rows of ballistic missiles.

More equipment upgrades followed with a Claas Matador and then two Mercators but I can't remember the bed size but probably less than 15 foot as we did not demount the bed to move along the highway. These later models all had bulk tanks to collect the grain and an auger pipe to dump into a trailer alongside, either stationary or moving in sync. My job was to run the tractor and trailer alongside and under the auger to empty the tank when full. It took me a while to get the knack of this and there were one or two spills in the learning process. Having got a full trailer I would head back to the farmyard where some farmers chose to 'bagged off' from the trailers and some opted to bulk dump into a purpose built storage shed. Bulk dumping allowed drying of the grain to take place. A reduced moisture content made it more attractive to the brewing market and a better price yielded.

Many farmers began buying their own combines and contracting began to decline. Few farmers thought of the economics of having such a large asset sitting idle for 48 weeks in the year and also their lack of experience driving such a machine. Witness even today the lovely green strips that appear in September on a field that has been combined with the draft set wrongly. Rather than collecting the corn it must have been blowing out 'over the back' with the straw.

One or two customers agreed to not buy their own machine if we would give them priority when their crops were ready. This worked for us and helped cover our overheads.

## Later Days

At this time in our history the family had become more involved with the workings of the tenant farm that my Great Uncles had farmed. As a family we eventually moved to live on the farm in the late 60s. We retained the combines for our own cutting requirements and we kept one of the old threshers. The land was poor sandy soil that was fine for carrots, potatoes and sugar beet but never yielded any great margin.

With passing of my grandfather, my uncle and my father there was no future in farming for the family and the land was released back to the landlord and the lease handed in.

## Two Family Incidents

We had some corn that had been cut while still damp and had spread it out in an upstairs granary to dry but it had gone mouldy. In order to sell the grain we needed to 'dress' it, that is sift it and clean it. The idea was to shovel it into the thresher on the top platform in the way we would normally have fed in the sheaves of corn. The corn would pass through the whole threshing process but with no straw and the fan system would blow out the dust and the mould. At the rear of the thresher we had an old bath to catch the grain from the bagging slots and an auger to then lift it into trailers. It was a good plan but while setting up the thresher in the correct location one of the side floor poles jumped out of its socket and the side floor collapsed down and my uncle fell to the floor. He never really recovered and never worked again.

There is also a second side story.

My father always was the one working on the top of the thresher cutting the twine around the sheaves and dropping the straw into the drum. He and his brother, like many others in those days, were both smokers but clearly it was impossible to smoke in such an environment what with the dust and the danger of a fire. Instead he would chew grains of corn and masticate this into a kind of chewing gum. While the connection cannot be proved, in later life it was discovered that he was highly gluten sensitive with all the fronds in his stomach wall having been destroyed.

## Conclusion

I look back on these summer periods in my early life with great affection. I met some great Yorkshire characters and I felt like I was contributing to the farm income. I remember the summers as always being hot and sunny (which I doubt they were). Having moved south at 18 years old I still used to take a few friends up for a couple of weeks each summer to help with the harvest.

What I didn't miss were the cold damp November days lifting sugar beet and potato harvesting. Which is why I ended up being a Physicist and subsequently a business owner in a warm office and laboratory. A business owner with perhaps some of my grandfather's blood in my veins.

My farming background watching my grandfather, my father and my uncle taught me that when you have little money in the bank you have to roll your sleeves up, get grease under your finger nails and fix the problem yourself. Harvest time was one of those times when a machine stopped was a disaster and once I had passed my driving test I was promoted to the 'go and get and fast' pair of hands sent to Scalings who were our local Claas dealer.

I loved every minute of it.