

Tractors



On the E27N with nephew Tony in the foreground

Before the war ploughing had to be done with horses. Two horses could, with luck and on the lighter land, plough one acre a day. One type of plough used with horses was a balance plough, one furrow turning one way and one the other. At each headland the horse was turned 180° with a swivel on the plough allowing this. This method saved marking out cants thereby leaving no open furrows as ploughing could start at one end of the field and continue right across with a more even finish. A similar method is used today with turnover ploughs.

One of the large fields which was down to permanent grass had been ploughed in 5 yard cants. I'm not sure of the reason for this but it made waves all across the field. Once during a haymaking

session the tines of the sweep dug into one of the ridges and the sweep lifted in the air together with the front of the tractor.

With the outbreak of the war more corn crops had to be grown, and we were commanded by the government to grow over 100 acres, for which the land was unsuited. Mechanisation was needed, although horses were still used for harrowing and drilling.



A collection of 1930's tractors, with the 10-20 in the foreground

Our first tractor was purchased in 1938. This was an International 10-20, top speed 5mph, so it was a challenge to plough all the land we had been ordered to cultivate. It was on steel wheels with a petrol TVO engine. Because of the steel wheels it wasn't allowed on the road.

TVO stands for tractor vaporising oil, which was very similar to paraffin, but with a lower combustion temperature. It was far better than the Fordson for starting. There were no self-starters, a

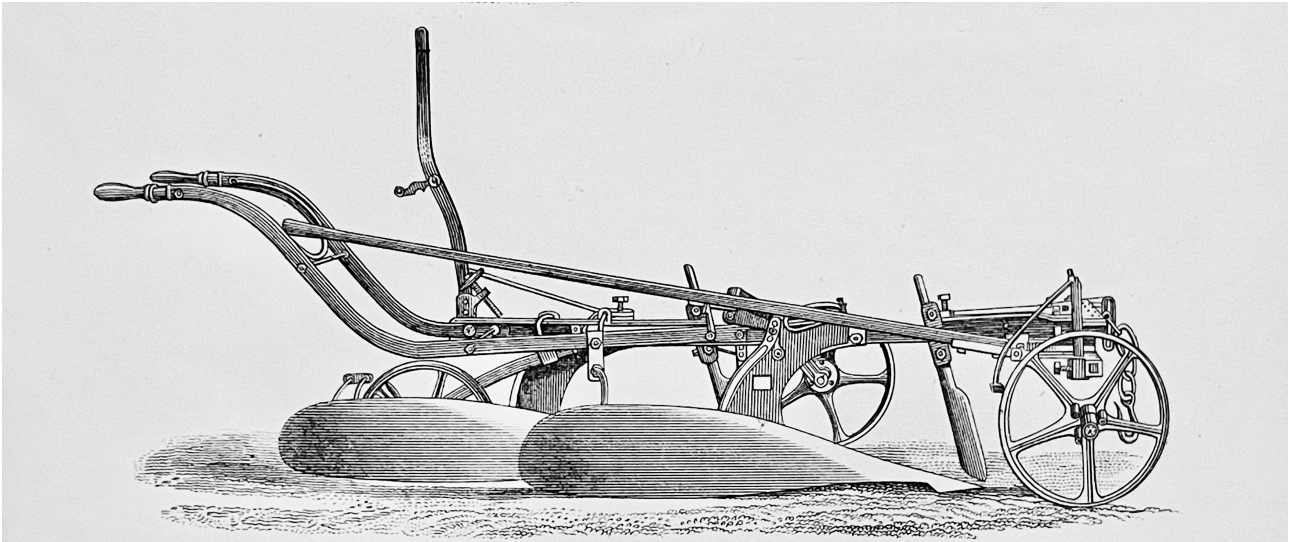
magneto¹ being used to produce the spark for ignition. This required a smart pull-up on the starting handle. I found the best way was to push the handle around until compression was felt then give a good pull up with it in the 7 o'clock position. Pushing downwards from the 1 o'clock position was likely to result in a broken wrist if the engine backfired.

One day the tractor had a fuel blockage and stopped. After cleaning the blockage I tried to restart it and the tractor caught fire. I was a long way from the farm buildings, so I had to put it out somehow. The only result of trying to smother it by hitting it with my coat was that my watch flew out of the pocket. Luckily it was not damaged. Water was often needed during the day and some was carried in a can. However this was not sufficient to extinguish the fire so I drained the radiator into the can and threw it on, managing to put the fire out. Then there was a long walk back to the farm to fetch 5 gallons of water back across the fields. However, no damage was done to the tractor, so only time was wasted.

This tractor could pull a two-furrowed plough and other trailed implements. It had spade lug rear wheels and ploughing rims on the front wheels so that it would turn in mud, otherwise when the ploughing rims got worn it would carry straight on at the headlands, as there was no grip. It could at best plough four acres a day with the two-furrow plough, but only two acres on some of the heavy land.

The only brake was a crude hand-brake which would only hold on flat land, so using the right gear on steep slopes was essential. The engine on the 10-20 ran at 1000 revs per minute, which is considered a tick-over speed nowadays. Perhaps that is why it lasted all through the war with only a new clutch and the occasional decarbonising of the engine and grinding of the valves. It had a very unusual method of oil changing in that every 10 hours half the oil was drained and filled up with new. After 50 hours the whole lot was drained and the filter cleaned. The filter was a brass affair called a puralator with 3000 holes per square inch.

¹ A **magneto** is an electrical generator that uses magnets to produce periodic pulses of alternating current.



A two furrowed plough

At that time all implements for tractors were towed. The only exception was the Ferguson, which wasn't generally available and was considered too small by some people. This tractor, which used hydraulics to control the implements mounted on 3-point linkages, was first demonstrated in the Savoy ballroom, driven down the stairs and onto the ballroom by the inventor Harry Ferguson.

The plough on the trailed version was pulled out of the ground by a clever ratchet controlled by a rope. When first using this most operators looked behind, a bit tricky because there was only seven yards of headland in which to turn. After practice you could feel when the plough was coming out of the ground and this made it easier to avoid going into the hedge. To drop the plough the rope was pulled again and this raised the ratchet out of the notch and the plough penetrated the soil once more.

One man who had been used to horses wanted to drive the tractor. The trouble was he used to forget to put his foot on the clutch to stop and shouted out 'Whoa!' instead.

One day he was ploughing in a field bordered by a small hedge and slope down to the road. He got near the headland, pulled the rope to lift the plough and shouted 'Whoa!' He then went through the hedge onto the road, along the tarmac with his spade lugs, through the gate and back into the field. Meanwhile the army were having a

mortar trial in an adjoining field and had laid a telephone cable along the road. This was cut in half by the ploughing rims on the front wheels of the tractor. A soldier came along, found the break and mended it.

About half an hour later the tractor again went through the hedge and cut the telephone wire. The soldier came back to mend it and approached the tractor and said "Excuse me sir, will you be coming through any more today?" This rather upset poor Sid the tractor driver. After this experience he decided to go back to horses!

We put in for another tractor but these were almost impossible to get, as they had to be imported from America. We were eventually promised an International Crawler, but unfortunately it got sunk in the Atlantic on the way over. At last we did get another one but this was a Cletrac, quite a small plain tractor with caterpillar tracks and a high revving engine.

Although it was capable of pulling a two-furrow plough, it was barely strong enough and made hard work of it. It had a bit more trouble with frequent clutch changes and the prop shafts would occasionally break. Also sometimes a track would come off after a certain amount of work. This usually seemed to happen in the muddiest part of the field.

Other trailed implements at that time were adaptations of horse-drawn types, such as mowers with reciprocating blades.

In about 1947 the Fordson Major E27N came, to be followed by the new Major, which had electric starting and could be fitted with a diesel engine. Other companies were also changing to self-starting engines, such as the Massey and Ferguson, but we didn't have these at the time.

In later years, whilst at Biddenden, we bought The Leyland 344, which was quite an innovation. It was called 344 because it was 34 horsepower and had four cylinders. It had ten forward gears and two reverse, giving a great range of speeds. The Nuffield 460 had a similar arrangement with gears, but was more powerful. Leyland

kept altering the way they named their tractors, starting with the size of cylinders multiplied by the number. This was then changed to the number of drive wheels and engine horsepower.



Sell Those Horses Now!

A 1930s advert for a Cletrac tractor. Ours was a smaller version

