

The voice of Ireland's farming industry

IRISH
**FARMERS
JOURNAL**

www.farmersjournal.ie

www.farmersjournal.ie



TIPS FOR:

- ✓ Tractor Settings
- ✓ Plough Settings
- ✓ Skimmers & Trash-Boards

PLOUGHING TIPS

In association with
Kverneland

Source: Irish Farmers Journal 16 February 2013

Ploughing tips from an expert



BRUCE LETT
MACHINERY
CORRESPONDENT



With hopes for some dry spring ground just around the corner, and the sowing of crops high on the agenda for many tillage farmers, we spoke to Kverneland Ireland's John Colgan to get some tips on setting up a plough.

John has 36 years' experience as a demonstrator under his belt. That's a lot of plough settings in a range of different Irish conditions and we value his expertise.

All too often, we hook up to a plough without too much consideration for the correct set-up. As long as the ploughing looks reasonable, then that's fine is more often than not the attitude. I would be as guilty as the next on that score.

Go back 20 years and more, setting up a plough correctly wasn't just important, it was crucial. Why?

Most ploughing was done with an 80 horsepower, two wheel drive tractor carrying a four furrow conventional plough and ploughing maybe 16 inches.

If the plough and tractor was not set-up properly then the tractor literally could not pull it. Later, four-wheel-drive tractors with 50% more power, ploughing the same amount of ground meant that settings could be 'rushed'.

Today, correct settings are now more important than ever. This is because, while a tractor will plough with a poorly set-up plough, it will certainly consume much more diesel and put both the tractor and plough under unnecessary pressure.

With fuel prices remaining so high, we felt that it was a good time for a refresher article on plough set-up.

John Colgan brought down a Kverneland ES85 to the farm. This is a five furrow hydraulic vary-width reversible plough which he says is popular among cereal growers.

The heavier duty EG model, he explains, is more popular among potato and vegetable growers, and, in general, anyone who does deep ploughing.

The plough had a 300 headstock to cater for the extra power required for this type of ploughing and is equipped with No. 9 bodies.

THANKS

Many thanks to John Colgan of Kverneland Ireland for his guidance. Also thanks for travelling down with his plough on short notice when there was a break in the weather and his patience when the weather deteriorated so quickly.

The Kverneland ES85 will plough from 30cm to 50cm (12 inches to 20 inches) and has No. 8 bodies and a 200 headstock making it suitable for tractors up to 200hp.

The Kverneland No. 28 bodies are more popular for guys with bigger wheels because they leave a wider furrow and can cater for up to 710 tyres according to John.

Kverneland No. 8s, 9s and 28s will all fit the same saddle, according to John, but need an extra stay for the longer No. 28 for our stony conditions.

John's demo plough was equipped with trashboards instead of skimmers because of the amount

of straw and debris left on the fields this year, as many farmers have not been able to get fields cleaned off. But, as he says, they're not for everyone.

It was also fitted with a combi-wheel which allows the wheel to be used as a conventional plough wheel or as a transport wheel on the road.

Going on journeys, it protects both the plough and tractor from unnecessary loading and stresses. It also makes for a more comfortable journey for the driver.

We had a Valtra N163 out on test and it was the ideal opportunity to start from scratch and set up both the plough and the tractor.

To begin with, John advises taking your time when setting up a tractor and plough. "Have it right, it doesn't take long to check the lift arm measurements and tyre pressures."

The most important thing is to set up the tractor correctly and then forget about it because you know it correct. Any adjustment made when ploughing, only make them on the plough.

The photographs tell the full story.

TRACTOR SETTINGS



TYRE PRESSURES

It is very important that both rear tractor tyre pressures are the same when using a reversible plough. A couple of psi (bar) pressure in the difference can cause huge problems according to John. Uneven tyre pressures is one of the most common causes of uneven ploughing because operators don't check them and they think it will be alright. Tyre operating pressures will depend on the tyre manufacturer who should have a guide available and some are avail-

able on line or with iPhone or Android apps.

WHEEL DISTANCES

For a plough to run straight and true, the distance between the front wheels should be 5 cm (2 inches) more than the rear wheels. John says that if you are wearing the landslides a lot it means your tractor is not running straight.



LIFT ARM SETTINGS

Like tyre pressures, both lift arms need to be exactly the same length for even ploughing. Measure the left and right

drop arms and adjust if necessary so both of the lift arms are level. Like tyre pressures, this is especially important on reversible ploughs with one adjustment for both sides rather than individual adjustments for each.



SKIMMERS & TRASH-BOARDS

John's EG85 plough came equipped with trash boards rather than skimmers. The trash boards bolt on just above the main board and direct straw or bulky material down under the sod being flipped. Extra holes allow them to be re-positioned as they wear.

When setting up skimmers John explains that you don't want to be skimming too deep. If you're ploughing 20cm (8 inches) deep then you're going to skim about 5cm (2 inches) off the top of the sod. Skimming any more than will mean that you are putting too much pull on the tractor; so you're going to save a bit of fuel if you set them up properly.



MOULDBOARD EXTENSION

The addition of a tail piece (bottom left) prevents wear at the end of the mouldboard and helps to turn the sod over in stubborn ground.



ES85 - 85CM

All the clearance measurements on a Kverneland ES85 between boards, tips should measure 85cm (34 inches) and the 85cm (34 inches) should follow the whole way through the plough, says John.



PLOUGH LEG

When ploughing, the plough legs on a Kverneland reversible should be at right angles to the ground as John is indicating here.



VERTICAL ADJUSTMENT

On the Kverneland ES85 plough, each side of the plough, left or right can be set independently to ensure the plough leg is at right angles to the ground.



RUNNING TRUE

John points out that a good indication that a plough is running



true is that the top-link is in line with the plough and tractor.

MARKING THE HEADLAND

John is an advocate of always marking off the headlands of a field first to give enough room for comfortable manoeuvring when the ploughing begins proper.

PLOUGH SETTINGS



TOP-LINK

Once you have determined what depth you want to plough at, the top-link should be set in the middle of the slotted hole. Working in the slotted hole takes a lot of pressure off the headstock, top link and tractor. The top-link itself should not be parallel to the lift arms but at an angle downwards towards the tractor to achieve the correct geometry.

COMBI-WHEEL

If the plough is not at the desired depth at the back and parallel to the ground then it may be necessary to adjust both sides of the combi-wheel. The Kverneland ES85 plough is a hydraulic vari-width plough with a 30cm to 50cm (12-20 inch) range and John points out that the wider you plough the deeper you will need to plough as well so that the combi-wheel will require adjustment if changing ploughing depth.



DISC

Disc setting should be 1cm (1/2in) outside the landslide (not tip or share) and running straight and

parallel to it. This can be adjusted with the off-centre adjuster. Depth setting of the disc depends on how deep you are ploughing. Ploughing at 15cm (6 inches) for example you are going to have the disc pretty close to the plough point/share to turn a good sod. But it's nice to be able to let stones go through as well, John says. When ploughing deep you have to be careful that the disc is not set so low as to wear the bottom of the disc leg.

You can also see the long landslide on the rearmost sod which John says is for stability. A furrow widener is also available for working with big tyres which cuts into the furrow wall and make the track wider for your wheel on the next run.



CONNECTING-ROD

It is important that the springs are bowed as in the picture and the

distance between the plough body and the connecting rod should be 1mm to 2mm. This is adjusted as shown here.

SPRING ADJUSTMENT

The spring is then adjusted on the second adjusting bolt until the distance between the centre of the spring pins is 70cm (2+ inches). This is the correct load on the plough body. John explains that the advantage of this trip system is if you hit a rock and it trips, as the leg comes out of the ground the resistance becomes weaker. He says that it's not like a hydraulic trip system which gets stronger as it trips putting more pressure on the plough leg.

If you are ploughing in very hard ground and want to plough deep you add one extra leaf at the back, a No.5 leaf. Every extra leaf you add at the back adds 100kg extra pressure at the tip. You can fit a maximum of four leaves and that'll make the plough rigid John says.

